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MONTANA

APPRAISAL MANUAL

1972 EDITION

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Compiled by:
Appraisal and Research Bureau
Property Tax Division
State Department of Revenue

Approved by:
State Board of Equalization

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MONTANA APPRAISAL MANUAL

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FOREWORD

The legal and practical requirement of "equalization" of property tax burdens has been the duty of county commissioners, assessors and the State Board of Equalization since Montana became a state. Article XII, Section 1 of the Montana Constitution states: "The necessary revenue for the support and maintenance of the state shall be provided by the legislative assembly, which shall levy a uniform rate of assessment and taxation, and shall prescribe such regulations as shall secure a just valuation for taxation of all property, except that especially provided for in this article."

Further on in the Constitution (Article XII, Section 15), the State Board of Equalization is charged with the duty to ". . . do all things necessary to secure a fair, just and equitable valuation of all taxable property among counties, between different classes of property, and between individual taxpayers."

Failure to achieve uniform levels of assessment among counties results in serious inequities in intercounty tax burdens. These inequities are the result of three intercounty relationships:

1. The school foundation program that distributes revenue from state taxes (in 1970-1971 the State distributed to the counties $12,975,000 from the state income and corporation license tax, and $15,850,000 from the State General Fund) to the schools in the various counties - not solely on the basis of the number of pupils to be educated, but on the basis of need. The "need" is determined by the number of pupils in the county and the amount of money that a uniform levy will raise in each county. If there is not equality in assessment among the counties, then the amount of money raised by a uniform levy is not a measure of relative need, and the whole attempt to equalize the burden for education among the counties fails. Counties with below prescribed uniform levels of assessment receive an inequitably large share of the state aid for schools.

Each successive legislature increases the amount of money that is distributed to the counties under the school foundation program. Thus, any inequalities that exist in assessment levels become more significant with each successive legislature.

2. Intercounty property, such as railroads, utilities, oil pipelines, etc., is assessed as a unit by the State Board of Equalization and the assessed and taxable values are allocated to the counties, resulting in a uniform level of assessment of these properties among counties. Counties that deviate from the prescribed uniform level in the assessment of locally assessed property must adjust their millage rates accordingly to raise a given amount of revenue. Thus, counties assessing locally assessed properties below the state wide level of assessments take an inequitable share of the total tax payment on intercounty properties.

3. The uniform state levy, for general fund and university purposes, creates an inequitable burden on different counties unless there is uniformity both in listing property and in assessment levels.

While the practical need and legal obligation of equal assessment has been present from the beginning of Montana government, the significance of equalization has grown with the increase in the amount and variety of property to be assessed, the increase in both the amount and rate of the property tax burden, and the growing importance of state aid to local schools since the inception of the school foundation program in 1949.

The 1957 Classification and Appraisal Act resulted from a recognition on the part of the Montana Legislature that inequalities in assessment both within counties and among counties were intolerable. The Act (Sections 84-429.7 through 84-429.12, R.C.M. 1947) made it the duty of the board of county commissioners in each county, under the direction of the State Board of Equalization, to provide for the following:

1. For a general and uniform method of classifying lands in the State of

Montana for the purpose of securing an equitable and uniform basis for assessment of said land for taxation purposes.

2. For a general and uniform method of appraising city and town lots.

3. For a general and uniform method of appraising rural and urban improvements.

4. For a general and uniform method of appraising timber lands.

5. That the classification and appraisals referred to above be maintained current.

Much progress has been made in equalization of real estate assessments since the implementation of the 1957 Act. However, a continuous effort is necessary to maintain and improve the quality of real estate assessment.

This revised Montana Appraisal Manual has been prepared to aid in the implementation of requirements two, three and five of the 1957 Act calling for a general and uniform method of appraising city and town lots and improvements and rural improvements. It replaces the original edition which was issued in May of 1966. The use of the older manual must be discontinued as it no longer reflects present building costs and values.

STATE BOARD OF EQUALIZATION
STATE OF MONTANA

J. MORLEY COOPER, Chairman

JOHN C. ALLEY, Member

RAY J. WAYRYNEN, Member

ATTEST:

Vernon B. Miller, Secretary

(SEAL)

MONTANA APPRAISAL MANUAL

Purpose and Scope of Manual

The purposes of this Manual are as follows:

1. To present guidelines for uniform appraisal procedures in all counties.

2. To make available construction cost data that can be adapted to accomplish appraisals at true market value in all counties.

3. To present appraisal procedures, principles, and cost data in a form that will be usable by both experienced and inexperienced appraisers.

The content and scope of the material included in the manual has been determined by the following considerations:

1. The manual will provide the principles and cost information necessary to appraise the bulk of the property to be appraised.

2. The "replacement cost" approach to market value, for which the cost section of this manual is designed, is usually appropriate for the kinds of property covered in this manual.

3. The data needed to determine the replacement cost of each improvement can also be used to determine which properties are comparable, thus permitting the fullest possible additional use of the market data approach.

4. Because of the large number of residential properties, there are usually many valid sales. Therefore, residential property for which a sale price is not known can be compared with those for which the sale price is known. Replacement value as estimated by this manual can thus be checked against market value on enough residences to establish the true relationship.

5. Commercial and industrial properties not included in this manual often pose the following appraisal problems:

   (a) Lack of standardized construction features complicates the use of the cost approach.

(b) Lack of comparability on a cost basis one with another.

(c) Few comparable structures.

(d) Few comparable sales.

(e) The market value of these properties arises primarily from their ability to earn income. Since the other approaches to value are frequently not conclusive, the income approach becomes a valuable tool. The use of the income approach is beyond the scope of this manual.[1] The inexperienced appraiser should seek assistance in the appraisal of complex commercial and industrial properties.

As the need arises, and as our facilities permit, cost schedules included in this manual will be brought up to date, and additional schedules will be prepared covering other kinds of buildings and improvements.

Market Value Defined

Three widely accepted definitions of "market value" are as follows:

1. The highest price in terms of money which a property will bring if exposed for sale in the open market, allowing a reasonable time to find a purchaser who buys with knowledge of all the uses to which it is adapted and for which it is capable of being used.

2. The price at which a willing seller would sell and a willing buyer would buy, neither being under abnormal pressure.

3. The price expectable if a reasonable time is allowed to find a purchaser and if both seller and prospective buyer are fully informed.[2]

"Current" Defined

The need for a continuous effort to keep appraisals current results from any of the following conditions:

---

[1] For a full discussion of the income approach to value see The Appraisal of Real Estate, American Institute of Real Estate Appraisers, 36 South Wabash Avenue, Chicago, Illinois, 1964. Many other texts on the subject are also available.

[2] American Institute of Real Estate Appraisers, Appraisal Terminology and Handbook, 1967, p. 131.

1. The former appraisal on some properties may have been incorrect.

2. The construction of new buildings, major additions or remodeling.

3. Changes in the real estate market for some or all types of property.

4. Significant changes in value that occur because of physical deterioration, obsolescence or for economic reasons.

Keeping appraisals current means changing values whenever definite value changes actually occur. It is recommended that part of the appraisals in each county be reviewed, and if necessary, reappraised each year so that all locally appraised properties are adjusted to current values at least once in each five year period. This requires constant work in most counties.

Three Approaches to Value

Appraisers use three separate approaches to value, either singly or in combination. If used in combination, the values derived by the different approaches are not averaged. Rather the appraiser uses the results to aid his judgment in arriving at an estimate of value. A list and brief description of the three approaches to value follows:

1. Cost approach. The use of the cost approach involves determining the present new cost of reproducing the subject building with an identical structure or replacing it with a less costly but equally functional structure of more modern design. To arrive at present market value the reproduction or replacement cost must be reduced by the amount that physical depreciation and functional obsolescence, of the building itself or because of location of the building, has reduced the market value of the building below the present reproduction or replacement cost.

Since much judgment is required in determining realistic physical and functional depreciation in older buildings, the cost approach is relatively more satisfactory when applied to newer structures. With older residences it is especially necessary to check depreciated reproduction values with market data on comparable buildings.

The cost approach determines the upper limit of market value of improvements

since it may be assumed that a buyer will build rather than pay more than the reproduction or replacement cost of an existing building.

2. Market approach. The market approach consists of determining the selling price of properties on which recent sales have occurred, determining whether the selling price meets the definition of market value as outlined heretofore, and relating the known sales prices to comparable property. This is the principal approach to the value of unimproved residential land. It is a well adapted approach to the value of residential improvements in conjunction with the cost approach, since the comparability of different dwellings can be determined by the same data that goes into the determination of reproduction or replacement cost. The market approach check on reproduction value is especially necessary on older residences since it is a way of determining the effect of physical and functional depreciation on market value.

3. Income approach. The income approach is especially applicable to income-producing property. Since such property is presumably purchased because of its income earning ability, its market value can be assumed to be the present value of future net income. The use of this method to determine the market value of land and improvements requires a prediction of the following facts:

(a) The annual fair net rental value of the property to be appraised. The net income to consider is not that from any one tenant but rather the fair annual rental value of the subject property as determined by competitive rental conditions, or economic rent. Or net income can be determined by subtracting expenses from gross income.

(b) The duration of the net income stream.

(c) The rate of recovery of capital necessary to attract investors in similar property.

(d) The interest rate necessary to attract investment in similar property.

(e) Thus it may be seen that much of the information necessary for proper use of the income approach must come from market data.

The income approach is least complex when it is applied to income-producing

land where the income is usually assumed to be perpetual. In this case, it is only necessary to divide the appropriate interest rate into the estimated future net income to find the present reasonable investment value. When a refined approach to the present value of a terminable future income is required, the process is more complex.

The foregoing discussion of the income approach is presented primarily to define this approach and point out some complexities encountered in its use.

Procedure for Gathering Market (Sales) Data

A determined effort should be made by every appraiser to gather, screen and store for present or future use, sales as they occur in various areas of his county. These sales should be segregated by single family residential, multi-family, commercial and vacant lots and tracts. The collection of this data becomes necessary for the following reasons:

1. As indicated under the section entitled "Local Indexes", sales are necessary for the determination of correct local indexes.

2. The true market value of residential, commercial and industrial land can only be determined from actual screened sale prices of such property or comparable property.

3. Sales data on improved property usually lump both land and improvements together. The separate value of land and improvements on each property is needed in order to make fullest use of the sales-appraisal comparisons. Recent sales of comparable vacant lots with equally available utilities are very significant since they are helpful in separating land from improvement values.

4. Sale prices of older residences indicate to what extent physical depreciation and functional obsolescence have affected the market price or to what extent inflation has increased real estate values in any age category.

In selecting sales for sales-appraisal comparisons, care must be taken to use only sales that reflect true market value. To meet the definition of true market value, a sale must be at the highest price which a property will bring if

fully exposed for sale in the open market, and is purchased by an informed buyer. The sale must reflect the full price paid for the subject real estate, but the price should not include a consideration for personal property that may have been included. The payment conditions, unless they depart greatly from the normal, should not have a noticeable effect on the sale, and there must have been full exposure on the open market. Circumstances surrounding a sale should be examined to evaluate whether the consideration represented market value. If the transaction was a tax sale, sale between relatives, sale to a government agency, sale to a church, sale to a charitable organization, an inter-company sale, a judicial sale, etc., the sale might not meet the definition of an arms length transaction. It is recommended such sales, if used at all, be very carefully checked for undue influence.

Source of Building Cost Used in This Manual

In preparing this manual the staff of the State Board Equalization has studied the manuals used by all of the commercial appraisal firms that have done tax appraisal work in Montana in conjunction with and prior to the 1957 Classification Act, as well as manuals prepared by or for several of the other states. The residential cost section of this manual has been partially patterned after the Building Appraisal Manual prepared by the State of Washington. Building costs presented in this manual are based on those prevailing in Helena, Montana during the year 1971. Values computed by use of the cost schedules in this manual have been checked against actual selling prices in Helena.

Local Indexes

Surveys of building costs and residential sales covering all Montana county seats indicate that both costs and sales in Helena, Montana are as high as in any place in the State. In using this manual to arrive at the market value of Helena residences by the cost approach, 100 percent of the costs, less accrued depreciation, would be market value. Thus, Helena would be said to have an index of 100.

The actual index of any other city or town in Montana is determined by local selling prices of residences and residential lands, and reflects local costs only insofar as the costs determine selling prices. Thus, in establishing a local index that will adjust this manual to reflect accurate market value in a particular community, it is necessary to find the sale prices of enough houses of representative type within the community to establish the percentage relationship between the cost of building various types of residences, as indicated by this manual, and the actual selling prices of the same or comparable residences in the selected area. This relationship will indicate the correct local index. For example, if an average of representative residences are found to sell for 10 percent less than the cost determined by use of this manual, a local index of 90 percent would be appropriate.

Correct indexes frequently vary within counties. Usually, but not always, the county seat has the highest index, with smaller towns and rural residences being lower. Because residences on farms are usually only sold with the farm, and because they are less accessible to public services, such as schools, shopping facilities, fire and police protection, water and sewer, etc., the use of an index of 80 percent of the county seat index has been specified for farm residences. This 20 percent reduction does not apply to other farm buildings which are priced from separate schedules. For some of these same reasons, plus fewer job opportunities with resultant decreased buyer or rental demand, small towns frequently will have an index that reflects values lower than in larger towns.

It may be seen from the method of determining the local index from actual residential sales that average levels of value for the community will be reflected by the index. In communities where insufficient sales occur to establish an indication of market values, comparison to other communities with similar economic characteristics will serve to determine the proper local index.

Because of the complexity of establishing county indexes properly reflecting market value in each county, and because it is the responsibility of the State Board of Equalization to maintain equality in assessments among counties, the State

Board of Equalization should be called upon to help establish and approve county indexes.

The Use of Maps

It is recommended that the appraiser record all pertinent sales on a plat map of the area to be appraised. Appraised values should also be entered on a map. Such a procedure will help in extending sales information to comparable properties and in explaining the method used in arriving at values to interested taxpayers.

The Basis of Residential Land Value

The true market value of residential land can only be determined by the actual sale price of such property or comparable property.

The market value of land is determined by the use for which it has the greatest value. Common competing uses are agricultural, residential, commercial, industrial, and recreational.

The State Board of Equalization has set up the following guidelines to help Montana appraisers determine the proper basis of value:

1. The number of acres involved in a single tract is not the deciding factor in determining whether it is classified and graded as agricultural land or appraised as industrial, commerical or residential land.

2. Actual use of land for purposes other than raising crops or grass automatically indicates an appraisal based on the actual use.

3. If land is to be appraised for industrial, commerical or homesite purposes, rather than classified and graded as farm or grazing land, the taxing authority must have definite proof through actual sales, options, or offers to purchase, etc., that there is a present demand for the land under consideration for a use that would justify a higher value than can be economically justified in agricultural use.

4. For purposes of valuation, in some circumstances, an existing tract may be broken down and the value of different parts of the tract be based on different

uses or have a different value for the same type of use.

5. The appraisal of industrial, commerical and residential tracts should be: (a) based on current sales and (b) should be in line with other comparable property.

The Present Value of a Future Selling Price

The valuation of lands being developed for residential building presents a problem in that frequently the entire development cannot be sold for an established price within a reasonably short period of time. If only part of the land can be sold at prevailing prices in the immediate future, the appraiser can determine the present value of the balance of the land by estimating the present value of future sales. This can be done by referring to tables to be found in most appraisal books which give the present value of one dollar from one to fifty years in the future at different interest rates. The following brief example shows the present value of a property that can be sold at indicated dates in the future for $1,000, assuming that competitive uses for money give a five percent return and that property taxes are two percent of the $1,000.

Waiting Period Before Sale in Years	Present Value of Property
5	$ 713
10	508
15	362
20	258
25	184
30	131

The use of this procedure necessitates frequent reviews as sales in the area may unexpectedly accelerate or decline.

The Unit of Value for Residential Land

The appraised value of city and town lots of uniform depth is usually estimated on a front foot basis. Suburban lands fronting on a road or lakeshore are also sometimes valued on a front foot basis with depth tables being used to correct

for variation in depth. Acreage beyond the limit of the front foot valued land is frequently valued on a per acre basis. A square foot unit of value may be most appropriate for lots and tracts that are very irregular in shape.

Excess Acreage in Residential Tracts

If the market value of one acre for residential purposes is $1,000, the market value of the excess nine acres in a ten acre tract will usually be less than $1,000 per acre if the entire ten acres supports only the one residence. While the additional acres have value to a residential tract, each additional acre above a minimum usually has a declining value. The examination of actual sales in the area of the subject property is the only reliable way to determine the market value of the excess acres.

The market value of the excess acres will be determined by the highest value use to which it is adapted, the desirability of the land within the adapted use, and the demand for land for that use. If there are no other desirable homesites on the property the value of the excess acres may be chiefly influenced by their agricultural or recreational value. If there are other desirable homesites on the property the value of the excess acres may be influenced by view, water frontage, trees, accessibility to roads, utilities and other public services, etc. There are so many variables affecting both homesite and excess acreage values that each subject property is an individual problem. It is not uncommon for the per acre value of acreage in excess of the minimum requirements for a homesite to be less than half of the per acre value of the minimum homesite.

DIRECTIONS FOR RECORDING DATA ON APPRAISAL FORM OR CARD

Three different appraisal cards have been designed by the State Board of Equalization for the recording of appraisal data and the computation of estimates of value.

The types of cards are as follows:

(1) Urban Residential Property. Use a "Residential Improvement and Lot Appraisal Form."

(2) Commerical and Industrial Property. Use a "Commercial and Industrial Improvement and Land Form."

(3) Farm Buildings and Residences. Use a "Farm Improvement Appraisal Form."

The reason for using three different colored cards for the various types of property is to make them more readily recognizable in the filing system. The instructions on the pages to follow are primarily directed toward helping the appraiser in listing, sketching and grading of the property to be appraised.

An illustration of an urban "Residential Improvement and Lot Appraisal Form" with proper appraisal data entries is shown on a following page.

Directions for Recording Appraisal Data

1. Be sure to put subject property on proper card.

2. Fill out a card for each dwelling to be appraised.

3. Draw as neat a sketch as possible, use a ruler to insure straight lines. Keep sketch to proper scale. Generally a space between dots equals two feet.

4. Make sure to designate story heights and such additions as porches, attached garage, carports and patios.

5. When measuring irregular shaped buildings, be sure and measure all sides, then add up measurements and see if opposite sides check.

6. Make sure all measurements are placed in their proper location. Where possible, measurements should be shown on the inside of the sketch. Figures outside of the sketch indicate distance from one corner to another.

7. Correct measurements are a must. Any error in the measuring can mean an unfair assessment.

8. Should property owner or occupant decline to allow measuring and inspection of property, do not argue, leave property and report incident to supervisor or commissioners.

9. The listing of data pertinent to the computation of value of the subject property is very important. Thorough inspection of all component parts of the subject property will eliminate overlooking any deterioration or feature that would add or detract from market value.

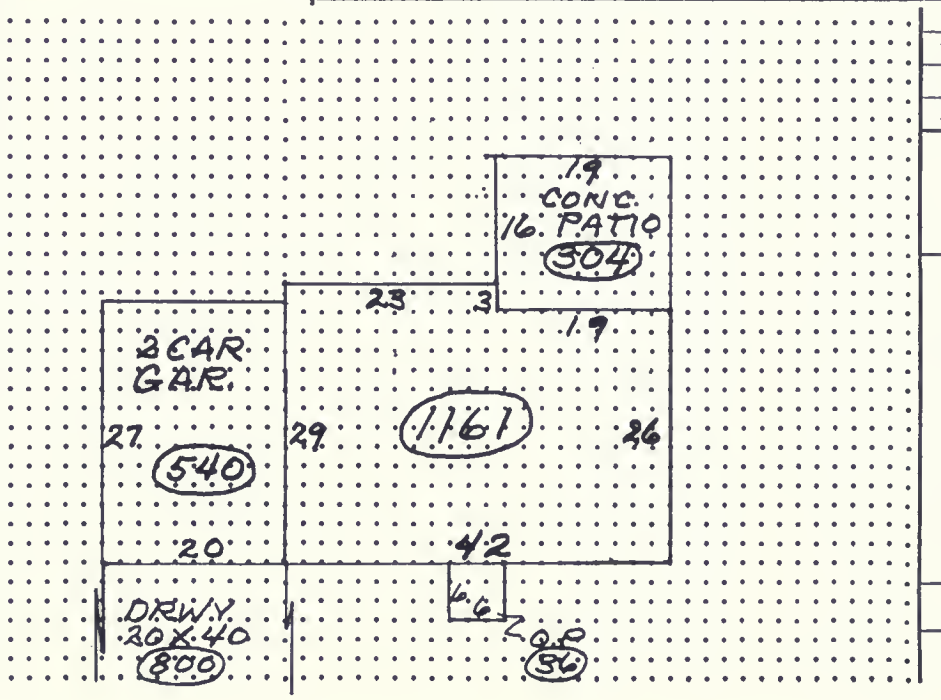
RESIDENTIAL IMPROVEMENTS AND LOT APPRAISAL FORM

OCCUPANCY	CONSTRUCTION	SIZE	(GRADE) TYPE	AGE	REMOD-ELED	CONDI-TION	REPLACE. VALUE	PHT. DEP.	PHYSICAL VALUE	FUNC. DEP.	NORMAL VALUE	LOCAL INDEX	SOUND VALUE
DWLG. SINGLE	1S/B NA FR.	1161	1F-5	1960	—	GOOD	28,182	16	23673	—	—	—	23675
1													
2													

IMPROVEMENTS									LAND COMPUTATION							TOTAL	
SIDE-WALKS	CURB-ING	ST. PAVED	ST. OILED	ST. DIRT	SEWER	WATER	GAS	ELEC-TRICITY	FRONTAGE FIGURED	AVERAGE DEPTH	UNIT PRICE	UNIT %	FRONT FT. PRICE	CORNER INFL.	TOTAL	% DEPR.	VALUE
✓	✓	✓			✓	✓	✓	✓	75	140	40	100	40	—	3000		3000

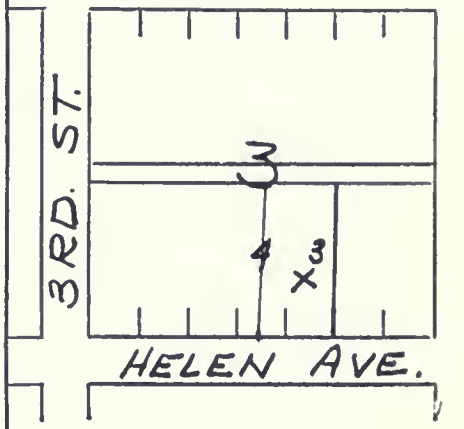
NO. SQ. FT.	PER SQ. FT.	
1161	13.90	16138
CONC. PATIO 304	.55	167
O.P. 36	2.95	106
ATT. GAR. 540	3.85	2079
DRWY 800	.55	440

BASE PRICE		
ADD OR SUBTRACT	PER SQ. FT.	FLAT
BASEMENT AREA 1161	2.85	+ 3309
ATTIC	NONE	—
INSULATION	BASE	—
HEATING 1161	1.20	+ 1393
PLUMBING	FLAT	+ 510
FIREPLACES	FLAT	+ 1450
TILING	BASE	—
BLT. IN	FLAT	+ 350
BSMT FIN 800	2.80	+ 2240
QUALITY FACTOR		
TOTAL BASE PRICE		
REPLACEMENT VALUE		28,182



TOTAL SOUND VAL. IMPS.	23675
TOTAL SOUND VAL. LAND	3000
ASSESSED VALUE IMPS.	9470
ASSESSED VALUE LAND	1200

LOCATION OF IMPS. IN BLOCK



DWELLING: (1S) 1½S 2S

FOUNDATION	
PIERS, POSTS	
CONC. OR CINDER BLK.	
CONCRETE	✓
STONE	

WALL CONSTRUCTION	
FRAME	✓
CONCRETE BLOCK	
BRICK	

EXTERIOR FINISH	
STUCCO	
WOOD OR COMP. SHINGLE	
ASBESTOS SIDING	
BRICK VENEER	
SINGLE SIDING	
MASONITE	✓

ROOF TYPE	
HIP	
GABLE	✓
FLAT	

ROOFING MATERIAL	
~~WOODEN~~ COMP. SHINGLE	✓
ASBESTOS SHINGLE	
SLATE	

BASEMENT AREA	UNFIN.	FIN.	UNFIN.	FIN.
¼			½	
¾			(FULL)	800

CEMENT FLOOR ✓

NO. – 3 ROOM ~~APTS.~~

ROOMS MAIN FLOOR		
KIT. 1	L.R. 1	D.R. 1
B.R. 2	BATH 1 3/4	

ATTIC NONE

UNFINISHED ¼ ½ ¾ FULL

FLOORS & STAIRS

INSULATION	
WALLS	✓
ROOF	✓
FLOOR	

FLOORS	RMS.
CONCRETE	
PINE	
HARDWOOD	
PLYWOOD	✓
SINGLE FLOORING	
CARPET & TILE	

FL. JOISTS 2" x 10" x 16" O.C.

INTERIOR FINISH	1ST	2ND
PAINT OR PAPERED	✓	
DRY WALL	✓	
LATH & PLASTER		
WALL BOARD		
KNOTTY PINE		
H'DWOOD PANEL 1 WALL	✓	

TRIM	
PINE OR FIR	✓
HARDWOOD	

PLUMBING	
BATH TUBS	1
LAVATORIES	11
TOILETS	11
KITCHEN SINKS	1
HOT WATER HEATERS	1
SHOWER STALLS MTL.	1
SEPTIC TK. OR CESS PL.	
WATER ONLY	
DISHWASHER	
GARBAGE DISPOSAL	

LIGHTING	
SUITABLE FOR TYPE	✓

FIREPLACES	
FIREPLACE STACKS	1
FIREPLACES	11
ARTIFICIAL F'PLACES	
INCINERATOR	

HEATING	
OIL (GAS) STOKER	
GRAVITY HOT AIR	
FORCED HOT AIR	
STEAM	
HOT WATER ~~RADIATORS~~ BB	✓
RADIANT	
FLOOR OR WALL	
AIR CONDITIONING	
NO HEATING	

OUTBUILDINGS	1	2
WALL FOUNDATION		
PIER FOUNDATION		
CONCRETE FLOOR		
EARTH FLOOR NONE		
ROOFING		
SIDING		
INT. FINISH		
CEMENT BLOCK		
BRICK		
O.H. DOORS		
ELECTRIC LIGHTS		

TILING	SQ. FT.
PLASTIC OR METAL	BASE
CERAMIC	

WINDOWS	
REGULAR	
SUITABLE FOR TYPE	✓
THERMOPANE	X
	X

BUILT IN	
REFRIGERATORS	
FREEZER LOCKERS	
OVENS & RANGE - 1F6	✓
STOVES	

DATE OF APPRAISAL 6-8-72

MEASURED BY J. B. D.

LISTED BY A. B.

PRICED BY I. C. L.

REVIEWED BY — DATE

POSTED BY — DATE

ADDRESS OF IMPS. 1234 HELEN AVE. HELENA, MONTANA

ADDITION MONTANA | BLOCK 3 | TRACT — | LOT 3 & W½ of 4

INSTRUCTIONS FOR LISTING COMPONENT PARTS OF A DWELLING ON THE APPRAISAL FORM OR CARD

FOUNDATION:

List the type of foundation, note the thickness as well as the quality. The quality of the foundation will have an influence upon the grade of house.

WALL CONSTRUCTION:

This pertains to the basic wall construction and will be noted as being either frame or masonry. If masonry veneer, list as frame, concrete block, or tile.

EXTERIOR:

List type of exterior cover, such as cedar siding, masonite, asbestos siding, face brick, common brick, etc.

ROOF TYPE:

List type, such as hip, gable, flat, etc.

ROOFING MATERIAL:

Be sure to list type of cover as this will have an important bearing on the value in some grades of houses.

BASEMENT AREA:

Determine the total area of the basement in square feet. This is important because the basement is computed by the actual square foot in this manual.

Determine the total square feet of finished basement and the number of rooms finished. Note the square feet of daylight windows. Note square foot areas of windows in excess of standard basement windows.

ROOMS - MAIN FLOOR:

List number of rooms on the first floor. Consider all of the first floor area, excluding porches, breezeways and attached garages, in the total number of square feet to be computed at the one story base price.

ATTIC:

The following guidelines are used to determine whether attic, 1½ story, or 2 story cost schedule, as presented in this manual, should be used.

In general, when the usable area on the second floor ranges from 35 percent to 75 percent of the ground floor area, it is classed as 1/2 story.

Dwellings whose usable area on the second floor exceeds 75 percent of the first floor area should be classed as 2-story structures.

Dwellings with usable floor area on the second floor of less than 35 percent of the first floor should be considered one story with a finished attic. The actual square feet of usable floor area should be determined. Dormer length should also be determined.

INSULATION:

Insulation is included in base cost in most grades; however, it should be noted in all grades.

FLOORS:

The type of floor in all dwellings should be noted. There are adjustments to be made for floor types in some grades of houses.

FLOOR JOISTS:

Dimensions and spacing of floor joists must be listed. Adequacy of floor joists will have an important influence on the quality grade.

INTERIOR FINISH & TRIM:

List the exact type of interior finish used on each floor. The quality of material and workmanship should also be noted.

PLUMBING:

All plumbing fixtures should be listed. Plumbing fixtures included in base cost are specified for each grade of residence. Add for all extra fixtures.

LIGHTING:

Normal wiring and electrical fixtures are specified and included in the base cost of each grade of residence. Electrical adjustments are not recommended unless it is observed that a house varies considerably from the normal established for each grade.

FIREPLACES:

All fireplaces should be listed and noted as to location and whether on the same stack or separate. Add for all fireplaces in all grades.

HEATING:

Add for all types of heat except free standing circulating heaters, stoves, etc. Give exact type of heating and source of heat.

OUTBUILDINGS:

This heading applies to outbuildings not connected to the dwelling. List as outlined on the card.

TILING:

Plastic tile and tile of similar quality are considered to be in the base cost in the average grade house. Ceramic tile should be noted where found. Where tile is not found in the average grade home simply note but do not deduct for this fact.

WINDOWS:

Note type of windows. Thermopane type windows should be noted but do not price. This feature, plus other extras, may have an influence on grade selected.

BUILT-INS:

List all built-in ovens, ranges, dishwashers, etc. Price from schedule found under this heading in each grade.

COMPLETION:

The occupancy, construction, size, type, age, condition, physical depreciation, and functional depreciation, if any, should be noted as indicated on the top of the card. Under "occupancy," designate if it is a single family or multiple family dwelling. Upon completion of listing and sketching of the subject property, the date of appraisal and the identity of the persons making the appraisal must be inserted in spaces provided at the lower right hand corner of the appraisal form. Unique features in construction or components, for which value has been added or subtracted, should be marked with an asterisk on the face of the card and thoroughly explained on the reverse side under "Remarks".

GRADING OF SINGLE FAMILY RESIDENCES

The accuracy of a residential appraisal depends largely upon the selection of the correct grade. Grade represents quality. Quality applies to both workmanship and type of materials used. The combination of quality workmanship and materials reflects increased cost and value. Proper grading is essential in selecting the correct pricing schedule to obtain realistic replacement cost. The cost of a dwelling constructed of high quality materials and with the best of workmanship throughout may be considerably more than that of one built from the same floor plan with inferior materials and workmanship.

The schedules in this manual have been developed to distinguish between variations in cost and represent the full range of conventional single family residential construction. The specifications as to type of facilities may not vary greatly between grades, however, the quality of materials, workmanship and design may be decidedly different.

The majority of dwellings fall within a definite grade of construction incorporating average quality of workmanship and materials. Consequently, better quality of construction, or construction of cheaper quality, can be determined by comparison with the average. A thorough inspection of both the inside and outside of a structure will reveal evidence of degrees of quality.

There are many chances for error in selecting the proper grade for a residence, such as grading the housewife's housekeeping ability, giving too much credit to the landscaping, being influenced by a new paint job, or the lack of maintenance. Always look for quality or the lack of it, and if the house happens to be in the older bracket try to picture the quality it represented when new and grade it as if it were new. Adjustments for condition will be made through application of depreciation.

This manual has eight basic grades of single family residences as follows:

1. 1F-1 Sub Standard, single family residence.
2. 1F-2 Poor Grade, single family residence.
3. 1F-3 Fair Grade, single family residence.
4. 1F-4 Slightly below average, single family residence.
5. 1F-5 Average, single family residence.
6. 1F-6 Good, single family residence.
7. 1F-7 Very good, single family residence.
8. 1F-8 Excellent, single family residence.

The basic grade, representing costs of construction with average quality of workmanship and materials involved, is designated as Grade 1F-5.

Grading would be a relatively simple process if all houses were built to conform to the base specifications outlined in this manual. Since this ideal condition does not exist, it becomes necessary to further refine the grading system. It is not unusual for conventional houses to be built incorporating construction qualities that fall in between the specifications of these established grades. If the house that is being appraised does not fall exactly in a specific grade, the grade designation should be adjusted as deemed necessary by the use of a percentage factor to reflect quality features that are only slightly better or poorer than the specifications. Example, 1F-5+5 or 1F-5-5. It is not advisable to increase or decrease grade cost figures by more than 5 percent except in the case of the 1F-8 or luxurious residences. It may be necessary to plus a 1F-8 by 25% or more to reflect a realistic value. Also, a 1F-1 may be decreased by more than 5% if necessary.

Photographic examples of typical dwellings throughout the range of construction quality are included in this manual to further illustrate typical grades. However, do not rely solely on the photographs.

DEPRECIATION

Depreciation goes to work immediately upon completion of a building and continues until the building is no longer usable. It is used in the cost approach to value and is the difference, stated as a percentage, between the current replacement cost of the building and its estimated market value.

The three types of depreciation that can effect value are physical deterioration, functional obsolescence and economic obsolescence. These are further broken down into curable and incurable.

Physical depreciation can be detected and recognized by personal inspection. It may consist of wear and tear of such items as gutters and downspouts, windows and screens or there may be a need for painting or redecorating. Loose siding, missing shingles, rusted flashings and valleys, cracked plaster, loose electrical switches and broken fixtures, leaking plumbing or a furnace or boiler in bad repair are among other indications of physical deterioration. These conditions are usually curable and should be a part of the normal maintenance given the structure. There are, however, other evidences of the deterioration of the bone structure of a building, such as a settling of foundations, cracked bearing walls, broken floor joists or sagging rafters that might indicate an incurable condition because it may not be economically sound to repair the defects.

Functional obsolescence reflects the loss of value because of decreased utility or desireability in a structure caused by such things as outmoded plumbing or heating, insufficient electrical outlets or abnormally high ceilings, etc. These are usually curable. Other conditions, such as outmoded architecture, a poor floor plan or columns and bearing walls that interfere with the proper utilization of space may not be possible to cure or may not be curable from an economic standpoint. It is possible to build an undesireable feature

and functional obsolescence into a new building.

Economic obsolescence is caused by forces outside of the building itself, such as business encroachment into a residential district or an influx of inharmoneous inhabitants into a neighborhood. It is very seldom, if ever, curable.

If abnormal depreciation is applied to a building, be sure to explain the reasons on the back of the appraisal card.

If economic obsolescence must be allowed in an affected area, draw a diagonal line through the local index box on the appraisal card and insert the economic factor under the local index factor. Mark the box with an asterisk and explain the reason for the further loss of value under "Remarks".

NORMAL PHYSICAL DEPRECIATION FOR DWELLINGS

AGE	1F-1	1F-2 & 1F-3	1F-4, 1F-5 & 1F-6	1F-7 & 1F-8
1	3%	3%	3%	3%
2	5	4	3	3
3	7	6	5	4
4	10	8	7	5
5	12	10	8	7
6	15	12	10	8
7	18	14	12	9
8	20	16	13	11
9	22	18	14	12
10	25	20	15	13
11	26	21	16	15
12	26	21	17	15
13	27	22	18	16
14	29	23	19	17
15	30	24	21	19
16	32	25	22	20
17	33	26	23	21
18	34	28	24	22
19	35	29	25	22
20	36	30	26	23
21	36	32	28	25
22	38	33	29	26
23	39	34	30	27
24	40	36	31	28
26	43	38	33	30
28	44	39	34	31
30	45	40	35	32
32	47	41	36	32
34	49	44	38	34
36	52	46	40	36
38	53	47	41	37
40	56	49	43	39
42	57	51	44	40
44	58	52	45	40
46	61	54	47	42
48	64	56	49	44
50	65	58	50	45
52	66	59	51	46
54	68	60	52	47
56	69	61	53	48
58	70	62	54	49
60	75	63	55	50
65		70	60	55
70			65	60
75				65
80				70

On dwellings that have exceeded 60 years effective age use extreme caution. These tables are to be used as a guide only under normal conditions. The suggested depreciations may be increased if the structure is in poor condition and decreased if it is in good condition for the age.

EFFECTIVE AGE

Major alterations, additions or rebuilding can extend the useful life of a building and add to its present value. The chronological life is no longer an indication of the amount of depreciation that should be applied. The "effective age" should be the guide.

Neither can the cost of alterations and additions be added directly to the previous appraised value of the building. So a method for determining the new age or "effective age" of a building is stated below:

EXAMPLE I. Building 51 years old was remodeled by 20% 9 years ago:

20% X 9 years = 180
80% X 51 years = 4080
Total 4260

4260 divided by 100% = 43 years effective age

EXAMPLE II. Building 40 years old was remodeled by 30% 1 year ago:

30% X 1 year = 30
70% X 40 years = 2800
Total 2830

2830 divided by 100% = 28 years effective age

Be sure to show the calculation of effective age on the back of the appraisal card.

DESCRIPTION AND PICTURES OF GRADE 1F - 1

Houses of this grade can be recognized by their poor design, workmanship, and material. These houses are unplanned and do not meet minimum building standards. They may consist of only one or two rooms with no plumbing or central heating system. This type of construction is generally used for migrant farm labor, very low income urban housing and lakeshore or mountain cabins.

RESIDENTIAL BUILDING SPECIFICATIONS
GRADE 1F-1

FOUNDATION:	Wood sills on masonry or stone piers.
FLOORS:	Single softwood over wood joists of minimum quality.
ROOF:	Low pitch, wood frame, cheap sheathing, roll roofing.
EXTERIOR:	Wood frame, low cost siding.
INTERIOR:	Wood frame, wallboard walls and ceiling.
PLUMBING:	None in base cost schedule.
HEATING:	None in base cost schedule.
ELECTRICAL:	Minimum quality fixtures and outlets.
BASEMENT:	None in base cost schedule. Use 1F-2 schedule.
ATTIC:	None in base cost schedule. Use 1F-2 schedule.
INSULATION:	None in base cost schedule. Add for wall insulation, $0.15, ceiling insulation, $0.10. Apply to square foot of floor area.

GRADE 1F-1 SCHEDULE

BASE COST SCHEDULE

Area in Sq. Ft.	Story 1
300	$6.95
400	6.70
500	6.50
600	6.30
700	6.15
800	6.00
900	5.90
1000	5.80

PLUMBING

Lavatory	$130.
Toilet	150.
Bathtub	190.
Metal shower	105.
Hot water heater	105.

HEATING

	Per sq. ft. 500	1000
Floor or wall furnace	$0.35	$0.25
Gravity hot air	0.40	0.35
Forced hot air	0.60	0.55

FLOOR ADJUSTMENTS

Softwood, double, add ----$0.25 S.F.

GARAGE

Attached	Detached
1 car --$2.10 S.F.	1 car -- $2.30 S.F.
2 car -- 1.50 S.F.	2 car -- 1.90 S.F.

Deduct $0.25 for no concrete floor.

FIREPLACE

Primitive ----$200.

CARPORTS AND PATIOS

Schedule includes $0.25 for concrete floor

Aluminum	$1.15 S.F.
Wood or comp. shingles	1.05 S.F.
Fiber glass	1.20 S.F.

PORCHES

	Per sq. ft.
Concrete or wood, no roof	$1.20
Open roofed and floored	1.65
Glass and frame enclosed	2.40

ROOF

Comp. shingles, add ----$0.10 S.F.

Class 1F-1 houses are found in logging camps, temporary encampments for construction, etc.

Grade 1F - 2 is often found on original homestead building sites. They consist of three, four, or more rooms and occasionally a second floor attic or one-half story.

RESIDENTIAL BUILDING SPECIFICATIONS
GRADE 1F-2

FOUNDATION:	Concrete, concrete block, stone or wood piers.
FLOORS:	Single softwood over minimum joists.
ROOF:	Low pitch, wood frame, 1" spaced sheathing, cheap comp. shingles.
EXTERIOR:	Wood frame. low cost siding or novelty siding.
INTERIOR:	Wood frame, wall board or inferior sheet rock walls and ceiling.
PLUMBING:	Four low cost fixtures; toilet, lavatory, kitchen sink, and water heater.
ELECTRICAL:	Minimum grade fixtures and wiring.
HEATING:	None in base cost schedule.
BASEMENT:	None in base cost schedule.
ATTIC:	None in base cost schedule.
INSULATION:	None in base cost schedule. Add for wall insulation, $0.15, ceiling insulation, $0.10. Apply to square foot of floor area.

GRADE 1F-2 SCHEDULE

BASE COST SCHEDULE

Area in Sq. Ft.	Stories 1	1½	2nd	Basement Unfinished
300	$9.55	$3.80	$4.55	$2.30
400	9.20	3.45	4.40	2.10
500	8.90	3.15	4.25	2.10
600	8.65	2.85	4.15	2.00
700	8.45	2.80	4.05	1.90
800	8.30	2.75	3.95	1.80
900	8.10	2.70	3.85	1.70
1000	8.00	2.65	3.80	1.65

PORCHES AND BALCONIES

	Per sq. ft.
Concrete or wood, no roof	$1.60
Open, roofed and floored	2.25
Glass and frame enclosed	3.15
Balcony and roof	2.05
Balcony, less roof	1.15
Wood stairway, per flight	50.00

CARPORTS AND PATIOS

	Per sq. ft.
Schedule includes $0.30 for concrete floor	
Aluminum	$1.15
Wood or comp. shingles	1.05
Fiber glass	1.20

ATTIC SCHEDULE

Attic cost = $1.50 per sq. ft.

ADJUSTMENTS TO 1F-2 COST SCHEDULE

PLUMBING

Lavatory	$130.
Toilet	150.
Bathtub	190.
Metal shower	105.

WALL VENEER - ALL GRADES

Per sq. ft. of wall area	
Face brick	$1.50
Roman brick	1.35
Used brick	1.25
Imitation flagstone	1.05
Local stone	3.90
Rubble stone	3.00

HEATING

Per sq. ft. of heated area	800	1200	1600
Floor or wall furnace	$ .35	$ .25	$ .25
Gravity hot air	.40	.35	.30
Forced hot air	.65	.60	.55

FIREPLACE & STACK

1 Story stack ---------- $890.

FLOOR ADJUSTMENTS

Double floor, add ---------- $0.30 S.F.

ROOF ADJUSTMENTS

Wood shingles, add ---------- $0.25 S.F.

GARAGE

FOUNDATION: Concrete block, stone or wood piers. (Deduct $0.30 for no floor.)
WALLS AND ROOF: Conforms to residential construction.
DOORS: Hinged or overhead type.
HEATING: None in base cost. (Add $0.15 per sq. ft. for heat.)
ELECTRICAL: Included in base cost. (Deduct $0.10 per sq. ft. for no electricity.)

GARAGE

Attached		Detached	
1 car	$2.90 S.F.	1 car	$3.15 S.F.
2 car	2.10 S.F.	2 car	2.60 S.F.

Driveway: $0.45 per sq. ft.

DESCRIPTION AND PICTURES
OF
GRADE 1F - 3

1F - 3 Grade meets, but does not exceed minimum building code requirements. Interior and exterior finishes are plain and inexpensive. Windows are at a minimum, paint and workmanship are generally poor. This grade of house is generally occupied by the lower income families and offers fair housing for the money spent.

RESIDENTIAL BUILDING SPECIFICATIONS
GRADE 1F-3

FOUNDATION:	6" concrete or concrete block perimeter walls.
FLOORS:	Softwood flooring, shiplap or plywood over 2" x 6" floor joists.
ROOF:	Medium to low pitch, sheathing, fair wood or comp. shingles.
EXTERIOR:	Wood frame, sheathing, fair grade of siding, painted.
INTERIOR:	Drywall or equivalent, few closets; very plain.
PLUMBING:	Five low cost fixtures; toilet, lavatory, bathtub, kitchen sink, and water heater.
ELECTRICAL:	Plain fixtures and few outlets.
BASEMENT:	None in base cost schedule.
ATTIC:	None in base cost schedule.
HEATING:	None in base cost schedule.
INSULATION:	None in base cost schedule. Add for wall insulation, $0.15, ceiling insulation, $0.10. Apply to square foot of floor area.

GRADE 1F-3 SCHEDULE

BASE COST SCHEDULE

Area in Sq. Ft.	Stories 1	Stories ½	Stories 2nd	Basement Unfinished
200				$3.65
300				3.55
400				3.40
500	$12.15	$4.30	$5.80	3.25
600	11.80	3.90	5.65	3.05
700	11.55	3.85	5.50	2.95
800	11.30	3.75	5.40	2.70
900	11.05	3.70	5.30	2.65
1000	10.85	3.60	5.20	2.60
1100	10.65	3.55	5.10	2.50
1200	10.45	3.45	5.00	2.40

ADD FOR FINISH IN BASEMENT APPLY TO FINISHED AREA

1 rm.	2 rm.	3 rm.
$2.80	$3.10	
2.55	2.80	
2.25	2.45	$2.70
2.15	2.40	2.60
2.10	2.30	2.50
2.05	2.25	2.45
2.00	2.20	2.40
1.95	2.15	2.35
1.90	2.10	2.30
1.90	2.10	2.30
1.85	2.05	2.25

Heat is included in finished basement cost schedule.

ATTIC SCHEDULE

Attic cost = $1.90 per square foot.
Add $35 per lineal ft. for dormers.
Heat is included in cost.

DAYLIGHT BASEMENT

Add $2.45 per sq. ft. of daylight basement window area.

PORCHES AND BALCONIES

	Per sq. ft.
Concrete or wood, no roof	$2.20
Open, roofed and floored	3.10
Glass and frame enclosed	4.45
Balcony and roof	2.80
Balcony, less roof	1.70
Wood stairway, per flight	65.00

CARPORTS AND PATIOS

Schedule includes $0.40 for concrete floor

	Per sq. ft.
Aluminum	$1.55
Wood or comp. shingles	1.45
Fiber glass	1.60
Patios Without Roof	
Flagstone floor	1.15
Quarry tile floor	1.70

ADJUSTMENTS TO 1F-3 COST SCHEDULE

PLUMBING

½ Bath	$280.
Lavatory	130.
Toilet	150.
Bathtub	190.
Tiled shower	195.
Metal shower	105.
Hot water heater	105.
Basement rough-in	185.

WALL VENEER - ALL GRADES

	Per sq. ft. of wall area
Face brick	$1.50
Roman brick	1.35
Used brick	1.25
Imitation flagstone	1.05
Local stone	3.90
Rubble stone	3.00

FLOOR ADJUSTMENTS

	Per sq. ft.
Hardwood, add	$0.35
Concrete slab, deduct-	.40
Single floor, deduct -	.40

ROOF ADJUSTMENTS

	Per sq. ft.
Shakes, light, add	$0.25
Built-up rock, add	.15

HEATING

	Per sq. ft. of heated area 800	1200	1600
Floor or wall furnace	$0.35	$0.25	$0.25
Gravity hot air	.40	.35	.30
Forced hot air	.65	.60	.55
Hot water recirculating	.95	.90	.85
Electric baseboard	.55	.55	.50

FIREPLACE & STACK

1 Story stack	$890.
2nd Fireplace on same stack	200.

BUILT-IN APPLIANCES

Range and oven combination	$250.
Counter top range	115.
Oven	200.
Exhaust fan and hood	60.
Refrigerator	200.
Dishwasher	175.
Garbage disposal	65.

See page 47 for more complete appliance price list.

TILE

Plastic or metal ---------- $0.50 sq. ft.

GARAGE

FOUNDATION: Concrete foundation and floor slab. (Deduct $0.40 for no floor.)
WALLS AND ROOF: Conforms to residential construction.
DOORS: Hinged or overhead type.
HEATING: None in base cost. (Add $0.15 per sq. ft. for heat.)
ELECTRICAL: Included in base cost. (Deduct $0.10 per sq. ft. for no electricity.)

GARAGE

Attached	Detached
1 car -- $4.00 S.F.	1 car -- $4.30 S.F.
2 car -- 2.90 S.F.	2 car -- 3.55 S.F.
3 car -- 2.20 S.F.	3 car -- 2.80 S.F.

Add $0.30 per sq. ft. of floor area for garage lining.

Driveway: $0.55 per sq. ft.

BASEMENT GARAGE

1 car	$1.70 S.F.
2 car	1.40 S.F.
3 car	1.15 S.F.

Cost includes partition, fire wall, overhead doors, drain, and electricity.

DESCRIPTION AND PICTURES OF GRADE 1F - 4

1F - 4 Grade offers housing of fair to low average quality. Low cost refinements are often incorporated to attract prospective owners. Such refinements may include low quality hardwood floors, extra ½ bath, some ornamentation at front of house and a small amount of interior paneling. Homes in this grade will meet VA and FHA standards.

RESIDENTIAL BUILDING SPECIFICATIONS
GRADE 1F-4

FOUNDATION:	6" good or 8" fair concrete perimeter walls.
FLOORS:	Plywood and asphalt tile or vertical grain fir, 2" x 8" joists.
ROOF:	Medium pitch, frame, 3/4" sheathing, average wood or comp. shingles.
EXTERIOR:	Wood frame, sheathing, average siding and paint, or pumice block.
INTERIOR:	Plaster or drywall, average trim, average closets and storage.
PLUMBING:	Five average fixtures; toilet, lavatory, bathtub, kitchen sink and water heater.
ELECTRICAL:	Average fixtures and outlets, range and dryer wiring and outlets.
HEATING:	None in base cost schedule.
BASEMENT:	None in base cost schedule.
ATTIC:	None in base cost schedule.
INSULATION:	Included in base cost schedule.

GRADE 1F-4 SCHEDULE

BASE COST SCHEDULE

Area in Sq. Ft.	Stories 1	Stories ½	Stories 2nd	Basement Unfinished
200				$4.30
300				4.15
400				4.00
500		$5.15	$7.00	3.80
600		4.70	6.80	3.60
700	$13.80	4.60	6.60	3.45
800	13.55	4.50	6.50	3.20
900	13.30	4.40	6.35	3.10
1000	13.05	4.30	6.25	3.05
1100	12.80	4.25	6.10	2.95
1200	12.50	4.15	6.00	2.85
1300	12.25	4.05	5.90	2.75
1400	12.15	4.00	5.80	2.60
1500	12.10	4.00	5.80	2.50
1600	12.00	3.95	5.75	2.40
1700	11.95	3.95	5.75	2.40

ADD FOR FINISH IN BASEMENT APPLY TO FINISHED AREA

1 rm.	2 rm.	3 rm.
$3.30	$3.65	$
3.00	3.30	
2.65	2.90	$3.20
2.55	2.80	3.05
2.45	2.70	2.95
2.40	2.65	2.90
2.35	2.60	2.80
2.30	2.55	2.75
2.25	2.50	2.70
2.25	2.50	2.70
2.20	2.40	2.65
2.20	2.40	2.65
2.15	2.35	2.60
2.15	2.35	2.60
2.15	2.35	2.60
2.15	2.35	2.60

Heat is included in finished basement cost schedule.

ATTIC SCHEDULE

Attic cost = $2.25 per square foot.
Add $40 per lineal ft. for dormers.
Heat is included in cost.

DAYLIGHT BASEMENT

Add $2.45 per sq. ft. of daylight basement window area.

PORCHES AND BALCONIES

	Per sq. ft.
Concrete or wood, no roof	$2.65
Open, roofed and floored	3.70
Glass and frame enclosed	5.35
Balcony and roof	3.40
Balcony, less roof	2.05
Wood stairway, per flight	81.00

CARPORTS AND PATIOS

Schedule includes $0.55 for concrete floor.

	Per sq. ft.
Aluminum	$1.85
Wood or comp. shingles	1.70
Fiber glass	1.95
Patios Without Roof	
Flagstone floor	1.35
Quarry tile floor	2.05

PLUMBING

½ Bath	$335.
Lavatory	155.
Toilet	180.
Bathtub	225.
Tiled shower	235.
Metal shower	125.
Hot water heater	125.
Basement rough-in	250.

WALL VENEER - ALL GRADES

Per sq. ft. of wall area	
Face brick	$1.50
Roman brick	1.35
Used brick	1.25
Imitation flagstone	1.05
Local stone	3.90
Rubble stone	3.00

FLOOR ADJUSTMENTS

	Per sq. ft.
Concrete slab, deduct	$0.25

ROOF ADJUSTMENTS

	Per sq. ft.
Shakes, light - add	$0.20
Shakes, heavy - add	.30
Built-up rock - add	.15

HEATING

	Per sq. ft. of heated area 800	1200	1600	2000
Floor or wall furnace	$ .40	$ .30	$ .25	
Gravity hot air	.50	.40	.35	
Forced hot air	.75	.70	.65	$ .65
Hot water recirculating	1.15	1.10	1.05	1.00
Electric baseboard	.70	.65	.60	.55
Combined air-heat cond.	1.60	1.50	1.45	1.40
Air cond. (Refrigeration)	1.10	1.10	1.00	.95

FIREPLACE & STACK

1 Story stack	$1065.
1½ Story stack	1180.
2 Story stack	1290.
1 Story with 2nd fireplace in basement	1420.
2nd Fireplace on same stack	240.

BUILT-IN APPLIANCES

Range and oven combination	$250.
Counter top range	115.
Oven	200.
Exhaust fan and hood	60.
Refrigerator	200.
Dishwasher	175.
Garbage disposal	65.

See page 47 for more complete appliance price list.

TILE

Ceramic - add	$1.20 sq. ft.
Plastic or metal	Base

GARAGE

FOUNDATION:	Concrete foundation and floor slab. (Deduct $0.55 for no floor.)
WALLS AND ROOF:	Conforms to residential construction.
DOORS:	Hinged or overhead type - one side door.
HEATING:	None in base cost. (Add $0.15 per sq. ft. for heat.)
ELECTRICAL:	Included in base cost. (Deduct $0.10 per sq. ft. for no electricity.)

GARAGE

Attached	Detached
1 car -- $4.75 S.F.	1 car -- $5.15 S.F.
2 car -- 3.45 S.F.	2 car -- 4.25 S.F.
3 car -- 2.60 S.F.	3 car -- 3.35 S.F.

Add $0.35 per sq. ft. of floor area for garage lining.

Driveway: $0.55 per sq. ft.

BASEMENT GARAGE

1 car	$2.05 sq. ft.
2 car	1.65 sq. ft.
3 car	1.35 sq. ft.

Cost includes partition, fire wall, overhead doors, drain and electricity.

DESCRIPTION AND PICTURES
OF
GRADE 1F - 5

This grade is generally found in better areas for people in the middle income group and is built by professional contractors. It is also found in better class speculative developments. In general, architectural design, workmanship, and materials are of average quality. Trim and millwork may be hardwood. Interior construction and finishes are good. The exterior of the house may have some brick or stone ornamentation.

RESIDENTIAL BUILDING SPECIFICATIONS
GRADE 1F-5

FOUNDATION:	8" perimeter walls.
FLOORS:	Hardwood or equivalent over sub-floor and 2" x 10" floor joists.
ROOF:	Medium pitch, solid sheathing, good comp. or wood shingles.
EXTERIOR:	Wood frame, good sheathing, good siding, pumice block or equivalent.
INTERIOR:	Frame, plaster or equal, good trim, ample closets and storage.
PLUMBING:	Five good fixtures; toilet, lavatory, bathtub, kitchen sink, and water heater.
ELECTRICAL:	Good fixtures and outlets, range and dryer wiring and outlets.
HEATING:	None in base cost schedule.
BASEMENT:	None in base cost schedule.
ATTIC:	None in base cost schedule.
INSULATION:	Included in base cost schedule.

GRADE 1F-5 SCHEDULE

BASE COST SCHEDULE

Area in Sq. Ft.	Stories 1	Stories ½	Stories 2nd	Basement Unfinished
200				$4.30
300				4.15
400				4.00
500				3.80
600				3.60
700				3.45
800	$15.05	$5.00	$7.20	3.20
900	14.75	4.90	7.05	3.10
1000	14.50	4.80	6.95	3.05
1100	14.20	4.70	6.80	2.95
1200	13.90	4.60	6.65	2.85
1300	13.60	4.50	6.55	2.75
1400	13.50	4.45	6.45	2.60
1500	13.45	4.45	6.45	2.50
1600	13.35	4.40	6.40	2.40
1700	13.25	4.40	6.40	2.40
1800	13.20	4.35	6.35	2.35
1900	13.10	4.35	6.30	2.35
2000	13.05	4.30	6.25	2.30

ADD FOR FINISH IN BASEMENT APPLY TO FINISHED AREA

1 rm.	2 rm.	3 rm.
$3.30	$3.65	
3.00	3.30	
2.65	2.90	$3.20
2.55	2.80	3.05
2.45	2.70	2.95
2.40	2.65	2.90
2.35	2.60	2.80
2.30	2.55	2.75
2.25	2.50	2.70
2.25	2.50	2.70
2.20	2.40	2.65
2.20	2.40	2.65
2.15	2.35	2.60
2.15	2.35	2.60
2.15	2.35	2.60
2.15	2.35	2.60
2.10	2.30	2.50
2.10	2.30	2.50
2.10	2.30	2.50

Heat is included in finished basement cost schedule.

ATTIC SCHEDULE

Attic cost = $2.50 per square foot.
Add $45 per lineal ft. for dormers.
Heat is included in cost.

DAYLIGHT BASEMENT

Add $2.45 per sq. ft. of daylight basement window area.

PORCHES AND BALCONIES

	Per sq. ft.
Concrete or wood, no roof	$2.95
Open, roofed and floored	4.10
Glass and frame enclosed	5.95
Balcony and roof	3.75
Balcony, less roof	2.25
Wood stairway, per flight	90.00

CARPORTS AND PATIOS

Schedule includes $0.55 for concrete floor.

	Per sq. ft.
Aluminum	$2.05
Wood or comp. shingles	1.90
Fiber glass	2.15
Patios Without Roof	
Flagstone floor	1.50
Quarry tile floor	2.25

ADJUSTMENTS TO 1F-5 COST SCHEDULE

PLUMBING

½ Bath	$370.
Lavatory	170.
Toilet	200.
Bathtub	250.
Tiled shower	260.
Metal shower	140.
Hot water heater	140.
Basement rough-in	250.

WALL VENEER - ALL GRADES

Per sq. ft. of wall area	
Face brick	$1.50
Roman brick	1.35
Used brick	1.25
Imitation flagstone	1.05
Local stone	3.90
Rubble stone	3.00

FLOOR ADJUSTMENTS

	Per sq. ft.
Softwood, deduct	$0.15
Concrete slab, deduct	.50

ROOF ADJUSTMENTS

	Per sq. ft.
Shakes, light - add	$0.15
Shakes, heavy - add	.25
Built-up rock - add	.15

HEATING

	Per sq. ft. of heated area 800	1200	1600	2000
Floor or wall furnace	$ .45	$ .35	$ .30	
Gravity hot air	.55	.45	.40	
Forced hot air	.85	.80	.75	$ .70
Hot water recirculating	1.25	1.20	1.15	1.10
Electric baseboard	.75	.70	.65	.60
Combined air-heat cond.	2.00	1.90	1.85	1.80
Air cond. (Refrigeration)	1.35	1.30	1.25	1.20

FIREPLACE & STACK

1 Story stack	$1185.
1½ Story stack	1310.
2 Story stack	1435.
1 Story with 2nd fireplace in basement	1575.
2nd Fireplace on same stack	265.

BUILT-IN APPLIANCES

Range and oven combination	$320.
Counter top range	140.
Oven	275.
Exhaust fan and hood	75.
Refrigerator	300.
Dishwasher	250.
Garbage disposal	75.

See page 47 for more complete appliance price list.

TILE

Ceramic tile add	$1.30 sq. ft.
Plastic or metal	Base

GARAGE

FOUNDATION:	Concrete foundation and floor slab. (Deduct $0.55 for no floor.)
WALLS AND ROOF:	Conforms to residential construction.
DOORS:	Overhead type - one side door.
HEATING:	None in base cost. (Add $0.15 per sq. ft. for heat.)
ELECTRICAL:	Included in base cost. (Deduct $0.10 per sq. ft. for no electricity.)

GARAGE

Attached	Detached
1 car -- $5.30 S.F.	1 car -- $5.75 S.F.
2 car -- 3.85 S.F.	2 car -- 4.70 S.F.
3 car -- 2.90 S.F.	3 car -- 3.70 S.F.

Add $0.40 per sq. ft. of floor area for garage lining.

Driveway: $0.55 per sq. ft.

BASEMENT GARAGE

1 car	$2.25 S.F.
2 car	1.85 S.F.
3 car	1.50 S.F.

Cost includes partition, fire wall, overhead doors, drain and electricity.

Grade 1F - 6 will have better closet and cabinet facilities than grade 1F - 5, more ornamentation and slightly better workmanship and materials.

RESIDENTIAL BUILDING SPECIFICATIONS
GRADE 1F-6

FOUNDATION:	8" concrete or equivalent perimeter and center walls.
FLOORS:	Hardwood, 1" sub-floor over 2" x 10" joists.
ROOF:	Medium to high pitch, 3/4" to 1" plywood sheathing, wood or comp. shingles.
EXTERIOR:	Wood frame, good sheathing, good cedar siding or equivalent.
INTERIOR:	Frame, plaster, drywall or paneling, hardwood trim and cabinets.
PLUMBING:	Five good fixtures; bathtub, toilet, lavatory, kitchen sink, water heater, and laundry facilities.
ELECTRICAL:	Very good fixtures, special outlets, range and dryer wiring and outlets.
HEATING:	None in base cost schedule.
BASEMENT:	None in base cost schedule.
ATTIC:	None in base cost schedule.
INSULATION:	Included in base cost schedule.

GRADE 1F-6 SCHEDULE

BASE COST SCHEDULE

Area in Sq. Ft.	Stories 1	Stories ½	Stories 2nd	Basement Unfinished
200				$4.30
300				4.15
400				4.00
500		$6.25	$8.55	3.80
600		5.70	8.30	3.60
700		5.60	8.10	3.45
800	$16.55	5.50	7.90	3.20
900	16.25	5.40	7.75	3.10
1000	15.95	5.30	7.65	3.05
1100	15.60	5.15	7.50	2.95
1200	15.30	5.05	7.30	2.85
1300	14.95	4.95	7.20	2.75
1400	14.85	4.90	7.10	2.60
1500	14.80	4.90	7.10	2.50
1600	14.70	4.85	7.05	2.40
1700	14.60	4.85	7.05	2.40
1800	14.50	4.80	7.00	2.35
1900	14.45	4.80	6.95	2.35
2000	14.35	4.75	6.90	2.30

ADD FOR FINISH IN BASEMENT APPLY TO FINISHED AREA

Area in Sq. Ft.	1 rm.	2 rm.	3 rm.
200	$3.30	$3.65	
300	3.00	3.30	
400	2.65	2.90	$3.20
500	2.55	2.80	3.05
600	2.45	2.70	2.95
700	2.40	2.65	2.90
800	2.35	2.60	2.80
900	2.30	2.55	2.75
1000	2.25	2.50	2.70
1100	2.25	2.50	2.70
1200	2.20	2.40	2.65
1300	2.20	2.40	2.65
1400	2.15	2.35	2.60
1500	2.15	2.35	2.60
1600	2.15	2.35	2.60
1700	2.15	2.35	2.60
1800	2.10	2.30	2.50
1900	2.10	2.30	2.50
2000	2.10	2.30	2.50

Heat is included in finished basement cost schedule.

ATTIC SCHEDULE

Attic cost = $2.75 per square foot.
Add $50 per lineal ft. for dormers.
Heat is included in cost.

DAYLIGHT BASEMENT

Add $2.45 per sq. ft. of daylight basement window area.

PORCHES AND BALCONIES

	Per sq. ft.
Concrete or wood, no roof	$3.25
Open, roofed and floored	4.50
Glass and frame enclosed	6.55
Balcony and roof	4.15
Balcony, less roof	2.50
Wood stairway, per flight	100.00

CARPORTS AND PATIOS

Schedule includes $0.55 for concrete floor.

	Per sq. ft.
Aluminum	$2.25
Wood or comp. shingles	2.10
Fiber glass	2.35
Patios Without Roof	
Flagstone floor	1.65
Quarry tile floor	2.50

ADJUSTMENTS TO 1F-6 COST SCHEDULE

PLUMBING

½ Bath	$405.
Lavatory	185.
Toilet	220.
Bathtub	275.
Tiled shower	285.
Metal shower	155.
Hot water heater	155.
Basement rough-in	250.

WALL VENEER - ALL GRADES

Per sq. ft. of wall area	
Face brick	$1.50
Roman brick	1.35
Used brick	1.25
Imitation flagstone	1.05
Local stone	3.90
Rubble stone	3.00

FLOOR ADJUSTMENTS

	Per sq. ft.
Concrete slab, deduct-	$0.55

ROOF ADJUSTMENTS

	Per sq. ft.
Shakes, heavy - add	$0.40

HEATING

	Per sq. ft. of heated area			
	800	1200	1600	2000
Floor or wall furnace	$ .50	$ .40	$ .35	
Gravity hot air	.60	.50	.45	
Forced hot air	.95	.90	.85	$ .75
Hot water recirculating	1.35	1.30	1.25	1.20
Electric baseboard	.85	.75	.70	.65
Combined air-heat cond.	2.50	2.35	2.30	2.25
Air cond. (Refrigeration)-	1.70	1.60	1.55	1.50

FIREPLACE & STACK

1 Story stack	$1305.
1½ Story stack	1440.
2 Story stack	1580.
1 Story with 2nd fireplace in basement	1735.
2nd Fireplace on same stack	290.

BUILT-IN APPLIANCES

Range and oven combination	$350.
Counter top range	140.
Oven	275.
Exhaust fan and hood	75.
Refrigerator	300.
Dishwasher	250.
Garbage disposal	75.

See page 47 for more complete appliance price list.

TILE

Ceramic tile	Base

GARAGE

FOUNDATION:	Concrete foundation and floor slab. (Deduct $0.55 for no floor.)
WALLS AND ROOF:	Conforms to residential construction.
DOORS:	Overhead type - one side door.
HEATING:	None in base cost. (Add $0.15 per sq. ft. for heat.)
ELECTRICAL:	Included in base cost. (Deduct $0.10 per sq. ft. for no electricity.)

GARAGE

Attached	Detached
1 car -- $5.85 S.F.	1 car -- $6.35 S.F.
2 car -- 4.25 S.F.	2 car -- 5.15 S.F.
3 car -- 3.20 S.F.	3 car -- 4.05 S.F.

Add $0.45 per sq. ft. of floor area for garage lining.

Driveway: $0.55 per sq. ft.

BASEMENT GARAGE

1 car	$2.50 S.F.
2 car	2.05 S.F.
3 car	1.65 S.F.

Cost includes partition, fire wall, overhead doors, drain and electricity.

DESCRIPTION AND PICTURES
OF
GRADE 1F - 7

Residences of this type are commonly found in the best residential districts. They are custom designed by professional architects and built by reputable building contractors. All materials and labor are of the best quality and all conveniences for better living have been incorporated into the design of this grade. Integration of the house and lot has been given much thought. The front elevation of the house features ornamention of excellent quality and the contemporary type will feature a large expanse of good quality glass and stone veneers.

RESIDENTIAL BUILDING SPECIFICATIONS
GRADE 1F-7

FOUNDATION: 8" reinforced concrete perimeter and center walls.
FLOORS: Good hardwood, 1" sub-floor over 2" x 10" joists.
ROOF: Hip, gable or flat with lam. beams and T & G deck, light cedar shakes, good cedar shakes or very good comp. shingles.
EXTERIOR: Wood frame, good sheathing and cedar siding or its equivalent.
INTERIOR: Wood frame, expertly finished plaster or drywall, hardwood paneling, trim and cabinets, formica counter tops, ample linen closets and storage.
PLUMBING: Five high quality fixtures; bathtub, lavatory, toilet, kitchen sink, water heater, and laundry facilities.
ELECTRICAL: Very good with special outlets and fixtures.
HEATING: None in base cost schedule.
BASEMENT: None in base cost schedule.
ATTIC: None in base cost schedule.
INSULATION: Included in base cost schedule.

GRADE 1F-7 SCHEDULE

BASE COST SCHEDULE

Area in Sq. Ft.	Stories 1	Stories ½	Stories 2nd	Basement Unfinished
200				$4.75
300				4.55
400				4.40
500		$7.15	$9.70	4.20
600		6.50	9.45	3.95
700		6.40	9.20	3.80
800		6.25	9.00	3.50
900		6.15	8.80	3.40
1000	$18.15	6.00	8.70	3.35
1100	17.75	5.90	8.50	3.25
1200	17.40	5.75	8.30	3.15
1300	17.00	5.65	8.20	3.05
1400	16.90	5.60	8.05	2.85
1500	16.80	5.60	8.05	2.75
1600	16.70	5.50	8.00	2.65
1700	16.55	5.50	8.00	2.65
1800	16.50	5.45	7.95	2.60
1900	16.45	5.45	7.90	2.60
2000	16.30	5.40	7.80	2.55
2100	16.15			
2200	16.15			
2300	16.10			
2400	16.00			
2500	15.95			
2600	15.90			
2700	15.85			
2800	15.75			
2900	15.70			
3000	15.65			

ADD FOR FINISH IN BASEMENT APPLY TO FINISHED AREA

1 rm.	2 rm.	3 rm.
$3.65	$4.00	
3.30	3.65	
2.90	3.20	$3.50
2.80	3.10	3.35
2.70	3.00	3.25
2.65	2.90	3.20
2.60	2.85	3.10
2.55	2.55	3.05
2.50	2.75	3.00
2.50	2.75	3.00
2.40	2.65	2.90
2.40	2.65	2.90
2.35	2.60	2.80
2.35	2.60	2.80
2.35	2.60	2.80
2.35	2.60	2.80
2.30	2.55	2.75
2.30	2.55	2.75
2.30	2.55	2.75

Heat is included in finished basement cost schedule.

PORCHES AND BALCONIES

	Per sq. ft.
Concrete or wood, no roof	$3.70
Open, roofed and floored	5.15
Glass and frame enclosed	7.45
Balcony and roof	4.70
Balcony, less roof	2.80
Wood stairway, per flight	115.00

CARPORTS AND PATIOS

Schedule includes $0.55 for concrete floor.

	Per sq. ft.
Aluminum	$2.55
Wood or comp. shingles	2.40
Fiber glass	2.70
Patios Without Roof	
Flagstone floor	1.90
Quarry tile floor	2.80

ATTIC SCHEDULE

Attic cost = $3.15 per sq. ft. Add $55 per lineal ft. for dormers. Heat is included in cost.

PLUMBING

½ Bath	$465.
Lavatory	215.
Toilet	250.
Bathtub	315.
Tiled shower	325.
Metal shower	175.
Hot water heater	175.
Basement rough-in	250.

WALL VENEER - ALL GRADES

Per sq. ft. of wall area	
Face brick	$1.50
Roman brick	1.35
Used brick	1.25
Imitation flagstone	1.05
Local stone	3.90
Rubble stone	3.00

FLOOR ADJUSTMENTS

	Per sq. ft.
Terrazzo, add	$1.55
Concrete slab, deduct-	.60
Flagstone, add	1.15

DAYLIGHT BASEMENT

Add $2.75 per sq. ft. of daylight basement window area.

HEATING

	Per sq. ft. of heated area			
	800	1200	1600	2000
Gravity hot air	$ .70	$ .55	$ .50	$ .45
Forced hot air	1.05	1.00	.95	.90
Hot water recirculating	1.55	1.50	1.45	1.40
Electric baseboard	.95	.90	.80	.75
Combined air-heat cond.	2.70	2.60	2.55	2.50
Air cond. (Refrigeration)-	2.00	1.90	1.80	1.75

FIREPLACE & STACK

1 Story stack	$1480.
1½ Story stack	1640.
2 Story stack	1795.
1 Story with 2nd fireplace in basement	1970.
2nd Fireplace on same stack	330.

BUILT-IN APPLIANCES

Range and oven combination	$450.
Counter top range	175.
Oven	400.
Exhaust fan and hood	125.
Refrigerator	400.
Dishwasher	325.
Garbage disposal	100.

See page 47 for more complete appliance price list.

GARAGE

FOUNDATION: Concrete foundation and floor slab. (Deduct $0.55 for no floor.)
WALLS AND ROOF: Conforms to residential construction.
DOORS: Overhead type - one side door.
HEATING: None in base cost. (Add $0.30 per sq. ft. for heat.)
ELECTRICAL: Included in base cost. (Deduct $0.10 per sq. ft. for no electricity.)

GARAGE

Attached	Detached
1 car -- $6.65 S.F.	1 car -- $7.20 S.F.
2 car -- 4.80 S.F.	2 car -- 5.90 S.F.
3 car -- 3.65 S.F.	3 car -- 4.65 S.F.

Add $0.50 per sq. ft. of floor area for garage lining.

BASEMENT GARAGE

1 car	$2.80 S.F.
2 car	2.30 S.F.
3 car	1.90 S.F.

Cost includes partition, fire wall, overhead doors, drain and electricity.

Driveway: $0.55 per sq. ft.

Grade 1F - 8 incorporates an exceptional amount of excellent planning and quality throughout.

RESIDENTIAL BUILDING SPECIFICATIONS
GRADE 1F-8

FOUNDATION: 10" reinforced concrete perimeter and center walls.
FLOORS: Hardwood, 1" sub-floor on 2" x 12" joists 16" on center.
ROOF: Medium to steep pitch, 1" solid sheathing, heavy shakes.
EXTERIOR: Wood frame, wood sheathing, good 8" to 10" vertical grain siding.
INTERIOR: Frame, plaster or hardwood paneling, trim, cabinets, closets, ample storage and other extras.
PLUMBING: Five excellent quality fixtures; lavatory, toilets, bathtub, kitchen sink, water heater, and laundry facilities.
ELECTRICAL: Excellent quality fixtures and many special outlets.
HEATING: None in base cost schedule.
BASEMENT: None in base cost schedule.
ATTIC: None in base cost schedule.
INSULATION: Included in base cost schedule.

GRADE 1F-8 SCHEDULE

BASE COST SCHEDULE

Area in Sq. Ft.	Stories 1	Stories 1½	Stories 2nd	Basement Unfinished
200				$4.75
300				4.55
400				4.40
500		$7.70	$10.45	4.20
600		7.00	10.20	3.95
700		6.90	9.95	3.80
800		6.75	9.70	3.50
900		6.60	9.50	3.40
1000		6.50	9.40	3.35
1100	$19.15	6.35	9.20	3.25
1200	18.75	6.20	9.00	3.15
1300	18.35	6.10	8.85	3.05
1400	18.25	6.00	8.70	2.85
1500	18.15	6.00	8.70	2.75
1600	18.05	5.95	8.65	2.65
1700	17.90	5.95	8.65	2.65
1800	17.80	5.85	8.55	2.60
1900	17.75	5.85	8.50	2.60
2000	17.60	5.80	8.45	2.55
2100	17.45			
2200	17.45			
2300	17.40			
2400	17.30			
2500	17.25			
2600	17.20			
2700	17.10			
2800	17.05			
2900	16.95			
3000	16.90			

ADD FOR FINISH IN BASEMENT APPLY TO FINISHED AREA

1 rm.	2 rm.	3 rm.
$3.65	$4.00	
3.30	3.65	
2.90	3.20	$3.50
2.80	3.10	3.35
2.70	3.00	3.25
2.65	2.90	3.20
2.60	2.85	3.10
2.55	2.80	3.05
2.50	2.75	3.00
2.50	2.75	3.00
2.40	2.65	2.90
2.40	2.65	2.90
2.35	2.60	2.80
2.35	2.60	2.80
2.35	2.60	2.80
2.35	2.60	2.80
2.30	2.55	2.75
2.30	2.55	2.75
2.30	2.55	2.75

Heat is included in finished basement cost schedule.

PORCHES AND BALCONIES

	Per sq. ft.
Concrete or wood, no roof	$4.00
Open, roofed and floored	5.55
Glass and frame enclosed	8.05
Balcony and roof	5.05
Balcony, less roof	3.05
Wood stairway, per flight	120.00

CARPORTS AND PATIOS

Schedule includes $0.55 for concrete floor.

	Per sq. ft.
Aluminum	$2.75
Wood or comp. shingles	2.55
Fiber glass	2.90
Patio Without Roof	
Flagstone floor	2.05
Quarry tile floor	3.05

ATTIC SCHEDULE

Attic cost = $4.25 per sq. ft. Add $55 per lineal ft. for dormers. Heat is included in cost.

PLUMBING

½ Bath	$500.
Lavatory	230.
Toilet	270.
Bathtub	340.
Tiled shower	350.
Metal shower	190.
Hot water heater	190.
Basement rough-in	250.

WALL VENEER - ALL GRADES

Per sq. ft. of wall area	
Face brick	$1.50
Roman brick	1.35
Used brick	1.25
Imitation flagstone	1.05
Local stone	3.90
Rubble stone	3.00

FLOOR ADJUSTMENTS

	Per sq. ft.
Concrete slab, deduct	-$0.65

ROOF ADJUSTMENTS

	Per sq. ft.
Comp. shingle, deduct	-$0.40

DAYLIGHT BASEMENT

Add $2.75 per sq. ft. of daylight basement window area.

HEATING

	Per sq. ft. of heated area 800	1200	1600	2000
Gravity hot air	$ .75	$ .60	$ .55	$ .50
Forced hot air	1.15	1.10	1.05	.95
Hot water recirculating	1.65	1.60	1.55	1.50
Electric baseboard	.95	.90	.80	.75
Combined air-heat cond.	3.00	2.90	2.85	2.75
Air cond. (Refrigeration)	2.20	2.10	2.00	1.95

FIREPLACE & STACK

1 Story stack	$1600.
1½ Story stack	1770.
2 Story stack	1940.
1 Story with 2nd fireplace in basement	2125.
2nd Fireplace on same stack	360.

BUILT-IN APPLIANCES

Range and oven combination	$450.
Counter top range	175.
Oven	400.
Exhaust fan and hood	125.
Refrigerator	400.
Dishwasher	325.
Garbage disposal	100.

See page 47 for more complete appliance price list.

GARAGE

FOUNDATION:	Concrete foundation and floor slab. (Deduct $0.55 for no floor.)
WALLS AND ROOF:	Conforms to residential construction.
DOORS:	Overhead type - one side door.
HEATING:	None in base cost. (Add $0.30 per sq. ft. for heat.)
ELECTRICAL:	Included in base cost. (Deduct $0.15 per sq. ft. for no electricity.)

GARAGE

Attached	Detached
1 car -- $7.15 S.F.	1 car -- $7.75 S.F.
2 car -- 5.20 S.F.	2 car -- 6.35 S.F.
3 car -- 3.90 S.F.	3 car -- 5.00 S.F.

Add $0.55 per sq. ft. of floor area for garage lining.

Driveway: $0.55 per sq. ft.

BASEMENT GARAGE

1 car	$3.05 S.F.
2 car	2.50 S.F.
3 car	2.05 S.F.

Cost includes partition, fire wall, overhead doors, drain and electricity.

MISCELLANEOUS BUILT-IN CONSTRUCTION

FIXTURE	QUALITY LOW	AVERAGE	GOOD
ELECTRONIC OVEN	$550	$700	$850
RADIO INTERCOM (BASE UNIT)	125	150	175
(Add per station or satellite)	25	30	35
THREE UNIT VACUUM CLEANER SYSTEM	425	475	525
(Add for extra outlet)	50	60	75
ELECTRIC BATHROOM HEATER	40	60	80
ELECTRIC DUMBWAITER	600	700	850
MANUAL DUMBWAITER	250	300	350
ELECTRIC EYE GARAGE DOOR OPENER	125	150	160
RADIO CONTROL GARAGE DOOR OPENER	---	265	265
PREFAB FOLDING STAIRWAY	45	60	---
LAUNDRY TUB (SINGLE)	120	135	155
LAUNDRY TUB (DOUBLE)	145	170	200
EXHAUST FAN	35	40	50
MIXER BLENDER FOOD CENTER	70	80	90
ARTIFICAL FIREPLACE (WOOD BURNING)	500	650	800
PREFAB WALL HUNG FIREPLACE (WOOD BURNING)	---	450	---
PREFAB WALL HUNG FIREPLACE (GAS)	---	275	---
KITCHEN SINK	130	175	235
WROUGHT IRON RAILING (24" HIGH)		$3.85 PER LINEAL FOOT	
(ADD FOR CORNER, END AND LINE POST)		3.50 EACH	
ORNAMENTAL IRON (ORNATE PATTERN COLUMNS)		20.00 EACH FOR 12" WIDE BY 8' HIGH SECTION.	

COST DISTRIBUTION BY PERCENTAGE OF COMPONENTS

	Percent of Base Cost	Base Cost Per Square Foot
Plans and permits	2.6	.37
Excavation, forms, concrete and backfill	5.0	.72
Lumber	13.9	2.02
Hardware	1.3	.19
Carpenter	13.5	1.96
Roofing	5.0	.73
Plumbing	12.2	1.77
Sheet metal	1.1	.16
Electrical	6.9	1.00
Drywall or plaster	11.8	1.71
Floors	8.6	1.24
Sash, doors, shutters and cabinets	9.2	1.34
Painting	6.4	.93
Sewer connection and clean up	2.5	.36
	100.0%	$14.50

This breakdown represents a one story 1F-5 house, with no basement, containing 1000 square feet. Other components such as heat, built-in appliances, fireplaces, porches, etc., are not included and are priced separately in the manual. General contractor's overhead and profit of 13.0% is included in the above figures.

A-FRAME TYPE RESIDENCES

LOW GRADE

AVERAGE GRADE

GOOD GRADE

EXCELLENT GRADE

CHALET OR A-FRAME TYPE SUMMER COTTAGES

The A-Frame type construction is becoming more popular in the building of summer homes on lake shores, mountain retreats and rural localities where medium priced homes are desired. The following schedules are based on 4 grades of construction: low, average, good, and excellent.

LOW GRADE

FOUNDATION:	Wood piers.
FLOOR:	Single over 2 x 6 floor joists.
ROOF:	Vertical boards & rolled roofing.
EXTERIOR:	Vertical boards or plywood.
INTERIOR:	Minimum finish.
LIGHTING:	Minimum quality fixtures & outlets.
PLUMBING:	None in base cost schedule.
HEATING:	None in base cost schedule.
BASEMENT:	None in base cost schedule.
INSULATION:	None in base cost schedule.

BASE COST SCHEDULE

Area in Sq. Ft.	Floors 1	1-1/4
200	$2.80	$3.05
300	2.45	2.65
400	2.15	2.35
500	2.05	2.25

NOTE: Use grade 1F-1 adjustment schedule to refine or adjust this Low Grade A-Frame.

AVERAGE GRADE

FOUNDATION:	Stone piers, concrete block or equivalent.
FLOORS:	Low grade plywood, 2 x 6 joists.
ROOF:	Fair sheathing, fair grade of cover.
EXTERIOR:	Fair sheathing, vertical siding or equivalent.
INTERIOR:	Plain finish and trim, few partitions.
PLUMBING:	Low cost toilet, lavatory and kitchen sink. Deduct $400 if none.
LIGHTING:	Low cost lighting and outlets.
HEATING:	None in base cost schedule.
BASEMENT:	None in base cost schedule. Use $1.75 per sq. ft. of basement area.
INSULATION:	None in base cost schedule.

BASE COST SCHEDULE

Area in Sq. Ft.	Floors 1	1-1/4	1-1/2
200	$7.35	$7.85	$8.70
300	5.55	6.00	6.70
400	5.10	5.50	6.10
500	4.70	5.10	5.70
600	4.45	4.85	5.45

NOTE: Use grade 1F-2 adjustment schedule to refine or adjust this Average Grade A-Frame.

PLUMBING

Lavatory	$100.
Toilet	125.
Bathtub	145.
Kitchen sink	100.
Hot water heater	75.

HEATING

Floor furnace	$125.
Forced air	450.
Electric wall heater	35 to 50.

A-FRAME SUMMER COTTAGE SPECIFICATIONS

GOOD GRADE

FOUNDATION:	6" concrete or 8" concrete block perimeter walls.
FLOORS:	Good flooring, subfloor on 2 x 8 joists.
ROOF:	Solid sheathing, good shingles, medium trusses and rafters.
EXTERIOR:	Wood framing, good sheathing and siding.
INTERIOR:	Good drywall or paneling, good trim.
PLUMBING:	Five standard fixtures; bathtub, toilets, lavatory, kitchen sink, and water heater. Deduct $960 if none.
LIGHTING:	Good fixtures and outlets.
HEATING:	None in base cost schedule.
BASEMENT:	None in base cost schedule. Use $2.65 per sq. ft. for basement area.
INSULATION:	Included in base cost schedule.

BASE COST SCHEDULE

Area in Sq. Ft.	Floors 1	1-1/4	1-1/2	1-3/4	2
300	10.75	11.45	12.55	12.90	13.30
400	8.95	9.60	10.65	10.90	11.30
600	8.10	8.75	9.65	9.95	10.25
800	7.45	8.00	8.90	9.20	9.45
1000	6.55	7.10	7.95	8.20	8.50
1200	6.15	6.70	7.55	7.75	8.00

HEATING

Sq. Ft. area	300	400	600	800	1000	1200
Floor furnace	.35	.35	.30	.30	.25	.25
Forced air	.65	.65	.60	.55	.50	.45
Recirculating hot water	1.15	1.15	1.15	1.10	1.10	1.00
Electric baseboard	.60	.55	.50	.45	.40	.40

PLUMBING

½ Bath	$285.
Lavatory	130.
Toilet	150.
Bathtub	190.
Kitchen sink	130.
Hot water heater	125.

NOTE: Use grade 1F-4 adjustment schedule to refine or adjust this Good Grade A- Frame.

A-FRAME SUMMER COTTAGE SPECIFICATIONS

EXCELLENT GRADE

FOUNDATION:	8" concrete perimeter walls and interior wall piers.
FLOORS:	Good flooring and subfloors on 2 x 10 joists, bridged.
ROOF:	3/4" to 1" plywood sheathing and laminated rafters.
EXTERIOR:	Wood framing, good sheathing and siding.
INTERIOR:	Good, hardwood trim, paneling and cabinets.
PLUMBING:	5 good fixtures; bathtub, lavatory, toilet, kitchen sink, and water heater.
LIGHTING:	Good fixtures and outlets.
HEATING:	None in base cost schedule.
BASEMENT:	None in base cost schedule. Use $2.65 per sq. ft. for basement area.
INSULATION:	Included in base cost schedule.

BASE COST SCHEDULE

Floors

Area in Sq. Ft.	1	1-1/4	1-1/2	1-3/4	2
500	$10.70	$11.60	$12.85	$13.20	$13.70
700	9.70	10.25	11.50	11.85	12.25
900	8.95	9.70	10.95	11.35	11.70
1100	8.40	9.25	10.75	10.60	11.00
1300	7.85	8.70	9.70	10.10	10.45
1500	7.60	8.25	9.35	9.75	10.00

HEATING

(Apply to heated area of bldg.)

Sq. ft. area	500	700	900	1100	1300	1500
Floor furnace	.40	.35	.30	.25	.25	.25
Forced air	.75	.70	.65	.60	.55	.50
Recirculating hot water	1.25	1.25	1.20	1.20	1.15	1.15
Electric baseboard	.65	.60	.55	.50	.45	.40

Fireplace, including chimney --------$1185.
Second fireplace, same chimney ------ 265.

NOTE:

Use grade 1F-5 to adjust for variations from the above specifications under normal conditions; however, if the quality of construction found in any individual structure varies from grade 1F-5, adjust by using the grade most comparable to quality.

DUPLEX
GRADES

GRADE 2F-4

GRADE 2F-5

GRADE 2F-6

DUPLEX GRADE 2F-4

SPECIFICATIONS

FOUNDATION:	8" fair or good 6" concrete perimeter walls.
FLOOR:	Plywood sub-floor on 2" x 8" floor joists.
ROOF:	Medium pitch, frame, 3/4" sheathing, average wood or comp. shingles.
EXTERIOR:	Wood frame, sheathing, average siding and paint, or pumice block.
INTERIOR:	Plaster or drywall, average trim, average closets and storage.
PLUMBING:	Ten average quality fixtures; 2 toilets, 2 lavatories, 2 bathtubs, 2 kitchen sinks, 2 water heaters and laundry trays.
ELECTRICAL:	Average fixtures and outlets.
HEATING:	None in base cost schedule.
INSULATION:	Included in base cost schedule.

BASE COST SCHEDULE

Area in Sq. Ft.	Stories 1	2
1000	$13.60	$6.50
1100	13.30	6.40
1200	13.00	6.25
1300	12.75	6.15
1400	12.65	6.10
1500	12.60	6.05
1600	12.50	6.00
1700	12.40	5.95
1800	12.35	5.95
1900	12.25	5.90
2000	12.20	5.90

FLOOR ADJUSTMENTS

	Per sq. ft.
Hardwood, add	$0.25
Concrete slab, deduct	0.15

ROOF ADJUSTMENTS

	Per sq. ft.
Shakes, light, add	$0.35
Built-up, tar & gravel, add	0.10

EXTERIOR WALL VENEER

	Per sq. ft. of wall area
Face brick	$1.50
Roman brick	1.35
Used brick	1.25

All other adjustments are to be taken from the Residential 1F-4 schedule.

DUPLEX GRADE 2F-5

SPECIFICATIONS

FOUNDATION: 8" concrete perimeter walls.
FLOOR: Hardwood or equivalent, 1" sub-floor over 2" x 10" wood joists. Linoleum over plywood in kitchen and bath.
ROOF: Medium pitch, wood frame, 1" solid or plywood sheathing, vertical grain cedar shingle or equivalent.
EXTERIOR: Wood frame, wood sheathing, good cedar siding, painted, very little trim.
INTERIOR: Wood frame, plaster or equivalent walls and ceiling, painted or papered, good trim and cabinets. Ample closets. Ceiling and wall insulation.
PLUMBING: Ten good quality fixtures; 2 toilets, 2 lavatories, 2 bathtubs, 2 kitchen sinks, 2 water heaters, and laundry trays.
LIGHTING: Good fixtures and outlets.
HEATING: None in base cost schedule.

BASE COST SCHEDULE

Area in Sq. Ft.	Stories 1	2
1000	$15.10	$7.25
1100	14.75	7.10
1200	14.45	6.95
1300	14.15	6.85
1400	14.05	6.75
1500	14.00	6.70
1600	13.90	6.65
1700	13.80	6.65
1800	13.70	6.60
1900	13.60	6.55
2000	13.55	6.55
2400	13.50	6.50
3000	13.50	6.50

FLOOR ADJUSTMENTS

	Per sq. ft.
Softwood, double, deduct	$0.10
Concrete slab, deduct	0.25

ROOF ADJUSTMENTS

	Per sq. ft.
Shakes, light, add	$0.15
Shakes, heavy, add	0.30

EXTERIOR WALL VENEER

	Per sq. ft. of wall area
Face brick	$1.50
Roman brick	1.35
Used brick	1.25
Local stone	3.90

All other adjustments are to be taken from the Residential 1F-5 schedule.

DUPLEX GRADE 2F-6

SPECIFICATIONS

FOUNDATION:	8" concrete perimeter walls. Interior concrete piers.
FLOORS:	Hardwood or equivalent, 1" sub-floor over wood joists, softwood flooring in kitchen and bath, linoleum cover.
ROOF:	Medium pitch, wood frame, 1" solid plywood sheathing, vertical grain cedar shingle cover.
EXTERIOR:	Wood frame, wood sheathing, good cedar siding, painted.
INTERIOR:	Wood frame, plastered interior finish on walls and ceilings, painted, hardwood trim, hardwood plywood cabinets, ample closets. Ceiling and wall insulation.
PLUMBING:	Ten high quality fixtures consisting of; 2 toilets, 2 lavatorys, 2 bathtubs, 2 kitchen sinks, 2 water heaters, and laundry trays.
LIGHTING:	Very good fixtures, special outlets.
HEATING:	None in base cost schedule.

BASE COST SCHEDULE

Area in Sq. Ft.	Stories 1	2
1000	$16.75	$8.05
1100	16.40	7.90
1200	16.05	7.75
1300	15.70	7.60
1400	15.60	7.50
1500	15.55	7.45
1600	15.45	7.40
1700	15.35	7.40
1800	15.25	7.35
1900	15.15	7.30
2000	15.05	7.25
2400	15.00	7.25

FLOOR ADJUSTMENTS

	Per sq. ft.
Softwood, double, deduct	$0.12
Concrete slab, deduct	0.30

ROOF ADJUSTMENTS

	Per sq. ft.
Shakes, light, add	$0.12
Shakes, heavy, add	0.25

EXTERIOR WALL VENEER

	Per sq. ft. of wall area
Face brick	$1.50
Roman brick	1.35
Used brick	1.25
Local stone	3.90

All other adjustments are to be taken from the Residential 1F-6 schedule.

GRADE MF-1

GRADE MF-2

GRADE MF-3

APARTMENT HOUSES
Four or More Units

	GRADE MF 1	GRADE MF 2	GRADE MF 3
FOUNDATION:	Masonry perimeter walls and footings.	Same as Grade MF 1.	Reinforced concrete footings & walls.
FLOORS:	Softwood flooring & sub-floor over wood joists; linoleum, kitchen & bath.	Same as Grade MF 1 May have carpet or hardwood.	Hardwood or carpet over sub-floor and joist; kitchen and bath vinyl.
ROOF:	Flat type, wood sheathing; composition cover.	Flat or gable, comp. or wood shingles.	Med. pitch, wood sheathing; good shingles or built-up rock cover; gutter & downspout.
EXTERIOR:	Wood frame; wood sheathing & siding; avg. trim features.	Wood frame, wood sheathing; brick ven.; avg. trim features.	Common brick bearing walls, frame with good siding or brick ven.; good trim features.
INTERIOR:	Wood frame; various low cost finishes on walls & ceilings; low cost built-in features & kitchen sink.	Wood frame; drywall or plaster finish on walls & ceilings; avg. built-in features & kitchen.	Same as Grade MF 2.
PLUMBING:	5 competitively priced fixtures per unit consisting of sink, toilet lav. & bathtub; hot water; laundry facilities.	4 or 5 average fixtures per unit, laundry facilities.	4 or 5 good fixtures per unit, depending on way hot water is supplied, laundry facilities.
LIGHTING:	Minimum fixtures & outlets.	Avg. fixtures & outlets.	Good fixtures & outlets.

PRICE PER SQUARE FOOT

	GRADE MF 1		GRADE MF 2		GRADE MF 3	
Area	1st Story	2nd Story	1st Story	2nd Story	1st Story	2nd Story
600	12.60	9.45	14.80	11.10	17.05	12.80
650	12.30	9.25	14.50	10.85	16.70	12.50
700	12.05	9.05	14.20	10.65	16.30	12.25
750	11.85	8.90	13.95	10.45	16.05	12.05
800	11.65	8.75	13.75	10.30	15.80	11.85
850	11.45	8.60	13.50	10.10	15.55	11.70
900	11.25	8.45	13.25	9.90	15.35	11.50
1000	11.00	8.25	12.95	9.70	14.85	11.15
1100	10.75	8.05	12.65	9.50	14.55	10.90
1200	10.55	7.90	12.50	9.30	14.30	10.75
1300	10.30	7.75	12.20	9.15	14.10	10.55
1400	10.20	7.65	12.05	9.05	13.90	10.40
1500	10.10	7.60	11.90	8.95	13.70	10.25
1600	10.00	7.50	11.80	8.85	13.55	10.20
1700	9.90	7.45	11.70	8.80	13.45	10.10
1800	9.85	7.40	11.60	8.75	13.35	10.00
1900	9.80	7.35	11.55	8.65	13.25	9.95
2000	9.70	7.30	11.45	8.60	13.15	9.90

NOTE: Compute total area of structure including office & utility room. Divide total area by number of units to obtain avg. of each unit. Use this schedule only for 4 or more unit apartments. An adjustment of 5% or 10% plus or minus can be made to compensate for the quality found in any given building.

ADJUSTMENT FACTORS - APARTMENTS

CONSTRUCTION

For apartments back to back ---------- deduct 5% from base cost

BASEMENTS

Basement apartments - Use 70% of one story base cost
Basement unfinished - Use 35% of one story base cost

FLOORS	GRADE MF 1	GRADE MF 2	GRADE MF 3
Concrete	$ -.25	$ -.51	$ -.79
Single	-.39	----	----

ROOF			
Built-up rock	+.24	Base	Base
Roll composition	Base	-.09	-.24
Steep pitch	+.07	+.07	+.04
Wood shakes	+.19	+.10	+.05

EXTERIOR			
Concrete block	+ 4%	- 3%	- 6%
Concrete block & stucco	+ 6%	- 2%	- 5%
Stucco on wood frame	Base	- 9%	-10%
Concrete block & brick veneer	+ 5%	Base	Base

HEATING	AREA PER UNIT		
	300-600	600-1200	1200-2000
Electric baseboard	$ 1.10	$ 0.90	$ 0.75
Floor or wall heaters	.44	.36	.30
Forced air	.80	.64	.55
Steam or hot water	1.25	1.06	.94

PLUMBING		BUILT-INS	
Bathtub	$230	Dishwasher	$350
Lavatory	160	Oven & range, electric	400
Stall shower	230	Oven & range, gas	350
Toilet	195		

ADDITIVES			Per sq. ft.
Balconies, unfinished	$2.10 S.F.	Garage, closed	$3.00 - 4.00
Add for cover	1.25 S.F.	Garage, open	2.50 - 3.00
Exterior stairway, comp.	$465 per flight	Carport	1.25 - 1.75
Exterior stairway, steel	550 per flight	Deduct 35% for 1st story row units.	
Exterior stairway, wood	275 per flight	Concrete paving	$0.45
Exterior stairway, concrete	300 per flight	Asphalt paving	.25
Basement entry way with steps	375		

Adjustments of up to ten percent plus or minus may be made within each grade.

EXAMPLE OF 12-UNIT APARTMENT BUILDING COMPUTATION

CONSTRUCTION: Average quality construction, 3200 sq. ft. per floor. Three floors, first floor, second, and basement apartments.

FOUNDATION: Concrete.

FLOORS: Concrete basement floor, good double softwood on first and second floors.

ROOF: Flat. Wood frame and sheathing, built-up composition.

EXTERIOR: Concrete block bearing walls, average trim.

INTERIOR: Wood frame, plaster board finish, average interior.

PLUMBING: Average. Five fixtures per unit.

LIGHTING: Average.

HEATING: One forced air unit per unit apartment.

OTHER FEATURES: Four basement entry ways, concrete. Two wooden stairways to second floor, with balconies 4' x 40' each.

NOTE: The above specifications compare favorably with Grade MF 2 apartment buildings.

40' x 80' = 3200 sq. ft. each floor: 3200 sq. ft. divided by 4 units = 800 sq. ft. per unit.

Base Grade MF 2 -- 800 sq. ft. unit, first floor @ ----------$13.75
Base Grade MF 2 -- 800 sq. ft. unit, second floor @ ---------- 10.30
Base Grade MF 2 -- 800 sq. ft. unit basement apartment @ 70% of 1st floor -- 9.63

Concrete block bearing walls -- requires a 3% reduction from base.

First floor, 3200 x $13.75 = $44,000 less 3% ----------$42,680
Second floor, 3200 x 10.30 = 32,960 less 3% ---------- 31,970
Basement apartment, 70% of first floor, or $13.75 x 70% = 9.63
3200 x 9.63 = $30,816 less 3% ---------- 29,890

SUB TOTAL ----------$104,540

Heating, 9600 x $0.64 ----------$ 6,145
12 Electric oven and range units @ $400. ------ 4,800
4 Basement entry ways @ $375. ---------- 1,500
2 Wooden stairways @ $275. ---------- 550
2 -- 4 x 40 balconies -- 320 sq. ft. @ 2.10 --- 672

TOTAL ----------$118,205

Quality Factor -- average = base.

MOTELS

Motels are quality graded. There are three grades of motels listed below. The cost is computed from the average square foot in each unit. The average sq. ft. per unit is found by dividing the number of units into the total number of sq. ft. in the motel, including all stairways, halls, utility rooms, etc.

SPECIFICATIONS OF EACH GRADE OF MOTEL FOLLOWS:

	GRADE I	GRADE II	GRADE III
FOUNDATION:	Concrete foundation.	Concrete foundation.	Concrete foundation.
FLOORS:	Softwood or plywood floor and sub-floor over min. joists, linoleum cover.	Good floor and sub-floor wood joists or concrete slab, w/w carpeting, linoleum or tile in bath or kitchen.	Good floor and sub-floor on wood joists, or concrete slab, w/w carpeting, good linoleum or tile in bath or kitchen.
ROOF:	Medium pitch, wood sheathing, composition roofing.	Medium pitch, wood sheathing, wood shingles.	Medium pitch, wood sheathing, good shingles or built-up tar and gravel.
EXTERIOR:	Wood frame, sheathing, and siding, low cost trim.	Wood frame, sheathing, and siding, or brick veneer, average trim.	Wood frame and sheathing or good masonry, face brick or stone veneer, good trim.
INTERIOR:	Wood frame partitions, dry wall or wall board.	Wood frame partitions, drywall or plaster.	Sound proof walls and ceiling, hardwood panelling.
PLUMBING:	Three fixtures.	Three standard fixtures.	Three excellent fixtures.
INSULATION:	Base	Base	Base
LIGHTING:	Minimum fixtures.	Average fixtures.	Above average fixtures.

COST PER SQ. FT. BASED ON SIZE OF UNIT FOR EACH GRADE OF MOTEL:

UNIT	GRADE I		GRADE II		GRADE III	
AREA	1st St.	2nd St.	1st St.	2nd St.	1st St.	2nd St.
150	17.10	12.80	20.10	15.10	23.10	17.35
200	15.40	11.55	18.10	13.55	20.80	15.60
250	14.40	10.75	16.85	12.70	19.35	14.55
300	13.75	10.30	16.10	12.10	18.55	14.20
350	13.20	9.85	15.50	11.60	17.80	13.35
400	12.75	9.55	15.00	11.25	17.25	12.95
450	12.45	9.30	14.60	10.95	16.75	12.55
500	12.25	9.20	14.35	10.80	16.55	12.45
550	11.95	9.00	14.05	10.55	16.20	12.10
600	11.90	8.90	13.95	10.45	16.00	12.00

These three quality grades may be adjusted up to ten percent, plus or minus, if necessary.

ADJUSTMENTS TO MOTEL COST SCHEDULES

CONSTRUCTION

Continuous Unit Construction - Base
Detached Units - Add 10% to base.

BASEMENT

100-250	300-450	500-750	800-1150	1200-1750	1800-3000
4.30	4.00	3.60	3.05	2.75	2.30

FLOORS:

	GRADE I	GRADE II	GRADE III
Hardwood	+ .45	Base	Base
Concrete with:			
Asphalt tile	- .15	- .40	- .40
Cork, vinyl or inlaid	+ .20	Base	Base
Carpet	+ .75	Base	Base

ROOF:

Built-up, tar and gravel	+ .25	+ .15	Base
Exposed beam	+ .35	+ .31	+ .20
Flat	Base	- .05	- .05
Roll composition	Base	- .15	- .25
Wood shakes	+ .25	+ .15	+ .05

EXTERIOR:

Concrete block	+ 6%	- 00%	- 6%
Stucco	Base	- 2%	- 5%
Stucco on wood frame	Base	- 5%	- 15%

HEATING & AIR CONDITIONING

		150-300	300-500	500-700
HEATING:	Electric baseboard	.90	.85	.80
	Floor or wall heater	.49	.40	.35
	Forced air	.88	.70	.55
	Heat pump	1.25	1.05	.95
	Steam or hot water	1.25	1.10	1.00
Air Conditioning:	Comb. heat & air cond.	1.25	1.10	1.00
	Add for custom design	1.00	.80	.75

Individual units should be considered personal property.

EXTRA PLUMBING		INTERIOR, ETC.	
Bathtub	$250.	Fireplace	$1100.
Lavatory	170.	Kitchen unit	440.
Stall shower	260.	Steel stair per flight	470.
Toilet	200.	Wood stair per flight	340.

(Continued Next Page)

ADJUSTMENTS TO MOTEL COST SCHEDULE - Continued

ADDITIVES

Carports ----------	$1.70 - 2.35 sq. ft.	Open shed----------	$1.50 - 2.50 sq. ft.
Concrete paving ---	.50 - .70 sq. ft.	Covered balcony ---	3.75 - 4.50 sq. ft.
Asphalt paving ----	.20 - .30 sq. ft.	Covered patio------	1.70 - 2.15 sq. ft.
Closed garage -----	3.85 sq. ft.	Uncovered balcony -	2.50 - 3.50 sq. ft.

ADJUSTMENTS TO QUALITY:

All base costs are for good construction and workmanship; however the appraiser must use good judgment in selecting the grade and in adjusting the base cost and the proper selection of additives. The three quality grade cost schedules may be adjusted up to ten percent, plus or minus, if necessary.

EXAMPLE OF MOTEL COST COMPUTATION

CONSTRUCTION: Good quality, two story motel, consisting of 30 units in addition to storage room and manager's office area. The first floor area equals 8000 sq. ft. and the second floor consists of 4000 sq. ft.

FOUNDATION: Concrete perimeter walls.

FLOORS: Concrete slab and asphalt tile on first floor, hardwood on second.

ROOF: Flat, with built-up rock cover.

EXTERIOR: Concrete block bearing walls, interior walls plastered, average trim.

INTERIOR: Wood frame, plastered walls and ceilings. Average built-in features. One kitchen unit in ten (10) motel units.

PLUMBING: Three fixtures in each unit plus 10 kitchen sinks. Manager's office area has extra toilet and lavatory.

LIGHTING: Good fixtures and outlets.

HEATING: Electric baseboard.

OTHER: Covered wood balcony, 630 sq. ft. Two wooden stairways.

NOTE: The above specifications most nearly match the grade III specifications. The underlined items must be adjusted in the computation.

Total area of first and second floor is 12,000 sq. ft.
12,000 sq. ft. divided by 30 units equals 400 sq. ft. per unit.

BASE COST:

		1st Floor	2nd Floor
Cost for avg. 400 sq. ft. unit		$17.25	$12.95
Con. slab, asphalt tile, 1st floor	- $0.40		
Flat roof	- .05		
Con. block walls (-6%)	- 1.04		- .78
Heating		+ .85	+ .85
	- 1.49	18.10	13.02
		- 1.49	
Total adjusted rates		16.61	

MOTEL COMPUTATION EXAMPLE - (Continued)

ADDED FEATURES:

10 kitchen units	@ $440	=	$4,400
1 toilet	@ 200	=	200
1 lavatory	@ 170	=	170
630 sq. ft. wood bal.	@ 3.75	=	2,363
2 wooden stairways	@ 340	=	680
Total added features			$7,813

TOTAL OF COMPUTATIONS:

1st floor area	=	8000 sq. ft.	@	$16.61	=	$132,880
2nd floor area	=	4000 sq. ft.	@	13.02	=	52,080
Added features						7,813
Total estimated reproduction cost						$192,773

No quality adjustment required
on this particular motel.

APPRAISAL OF MOBILE HOMES

(Exceeding 8 Feet in Width or 32 Feet in Length)

In grading mobile homes, the appraiser must use a lot of good judgment. He must take into consideration the quality of construction, with particular regard to floor joists, wall thickness, roof pitch, siding, amount of windows and the general ruggedness built into the unit.

Mobile homes are currently being built that are acceptable for F.H.A. loans. Specifications are approximately the same as for a conventional home.

The selection of Grade 1F-3 from the residential section of the Montana Appraisal Manual for those mobile homes of light to medium quality will give approximately the right replacement cost including the foundation and plumbing. It is possible to plus Grade 3 as much as 15 percent, or minus it as much as 10 percent. The use of the Grade 1F-4 cost schedule may be used on mobile homes of better quality, and these costs may be reduced by as much as 10 percent or increased as much as 5 percent. If an excellent quality mobile home is to be appraised, it may be advisable to select the 1F-5 or 1F-6 cost schedules. The base square foot prices should be applied to the entire enclosed living area. Porches, patios, basements, etc. should be added from the appropriate schedule for the grade.

Where it is possible to obtain the actual costs of the mobile home it is advisable to ask the owner, dealers or others for this data because it will enable the appraiser to become familiar with quality and prices of mobile homes in his area.

Any built-in features, such as oven and range, refrigerators, air conditioners, etc., should be noted and priced from the schedule. Movable furniture is considered personal property, and should not be included in the value of the home. It should be assessed as personal property by the assessor.

Depreciation of mobile homes should be based on the actual condition of the home at time of inspection. If the home has been moved many times it will show more depreciation than a home that has been on a permanent location since new. Therefore, a rigid depreciation table cannot be followed in every instance.

DEPRECIATION TABLE FOR MOBILE HOMES

1st Year	8%	11th Year	3% + 51% = 54%
2nd	7% + 8% = 15%	12th	3% + 54% = 57%
3rd	6% + 15% = 21%	13th	3% + 57% = 60%
4th	5% + 21% = 26%	14th	3% + 60% = 63%
5th	5% + 26% = 31%	15th	3% + 63% = 66%
6th	4% + 31% = 35%	16th	2% + 66% = 68%
7th	4% + 35% = 39%	17th	2% + 68% = 70%
8th	4% + 39% = 43%	18th	2% + 70% = 72%
9th	4% + 43% = 47%	19th	2% + 72% = 74%
10th	4% + 47% = 51%	20th	2% + 74% = 76%

There should be no further depreciation if the mobile home is still in normal use.

The above schedule is designed to reflect the fact that mobile homes depreciate at a more rapid rate than conventional residences. Obsolescence also accrues at a more accelerated rate, and this factor has been recognized to some degree in the schedule.

A detailed inspection of the property should enable the appraiser to determine the degree of variation from the above table that will give him a realistic value.

TRAILER PARKS

CHEAP

Typical sites developed for transient use in outlying areas or new industrial and military areas where there are minimum building codes, if any. Very close spacing and few facilities beyond minimum subsistence level. Base area per trailer space is 1,500 square feet and base number of spaces is 50.

SEWER -- 3" to 4" clay, few traps or vents, cesspool and septic tank ----------$95.00

WATER -- 2" mains, service to common hydrants, no trailer hook-ups ---------- 60.00

ELECTRICAL -- Low amperage circuits, overhead wiring, simple outlets at trailer sites. No telephone or speaker system ----- 95.00

GAS -- None, except bottled gas (not included) ---------- -----

CHEAP PARK -- Cost per space --- 250.00

MODIFIERS

Number of Spaces	10	20	30	40	50	60
Multiplier	1.10	1.07	1.04	1.02	1.00	.98

LOW COST

Typical sites developed for transient or semi-permanent occupancy in seasonal resort areas or near industrial or military areas. Usually designed to hold car-drawn trailers up to 40 or 45 feet long. Base area per site is 2,200 square feet and base number of spaces is 70.

ENGINEERING -- Limited plans, survey of site, fees and permits -$35.00

GRADING -- Graded for drainage, roads roughed in, minimum site leveling ---------- 50.00

STREET PAVING -- 18 to 22 foot roadway, crushed rock ---------- 70.00

SEWER -- 4" lines, 6" mains, minimum code, simple layout ----------135.00

WATER -- 3" mains, 3/4" service, hydrant at each space ----------100.00

ELECTRICAL -- Overhead wiring, 20 to 25 amperes per space. Few street lights ----------175.00

GAS -- None ---------- -----

LOW COST PARK -- Cost per space -$565.00

MODIFIERS

Number of Spaces	30	40	50	60	70	80
Multiplier	1.09	1.06	1.04	1.02	1.00	.98

Utility Buildings --------$2.65 sq. ft.

TRAILER PARKS

AVERAGE

These are average costs of parks built more or less for permanent occupancy. They will have spaces to accommodate the mobile home type of trailer up to 65 or 75 feet as well as large double wide trailers. Utility buildings not included. Base area per site is 2,800 square feet and base number of spaces is 100.

ENGINEERING -- Well detailed plans, site survey, specifications, permits, and fees ----------$95.00
GRADING -- Graded for drainage, roads roughed in, some trailer site levelings ---------- 85.00
STREET PAVING -- 24 to 30 feet wide, 2" asphalt on good base, some edging or curb ---------- 200.00
PATIOS AND WALKS -- Average 250 square feet of concrete or asphalt, car hardstands, walks near buildings ---------- 190.00
SEWER -- 4" service, 6" mains, adequate vents, good code installation ---------- 165.00
WATER -- 4" mains, valve connection and hydrant at sites, some sprinklers for common landscaping ---------- 140.00
ELECTRICAL -- Underground conduit, 30 to 40 amperes per site. Lighted recreation areas and street ---------- 275.00
GAS -- Low pressure gas to each site ---------- 95.00
MISCELLANEOUS -- Ornamental landscape with some masonry, good sign and entrance ---------- 70.00
AVERAGE PARK -- Cost per space --$1315.00

MODIFIERS

Number of Spaces	40	60	80	100	125	150
Multiplier	1.12	1.07	1.03	1.00	.97	.95

Utility Buildings ----------$3.20 sq. ft.

GOOD

The typical good trailer park is a mobile home park catering to the larger mobile home. It will accommodate large mobile homes with room for private gardens and complete recreational facilities. Base area per site is 3,600 square feet and base number of spaces is 160.

ENGINEERING -- Complete detailed plans and specifications, permits and fees ----------$120.00
GRADING -- Graded for drainage, view, and appearance, roads roughed in ---------- 125.00
STREET PAVING -- Good 3" asphalt roadways on prepared base, 30 to 36 feet wide, edged or curbs, parking areas for visitors and extra cars ---------- 285.00
PATIOS AND WALKS -- Trailer stands, patios, and car stands. Average 400 square feet of concrete per space, including walks around buildings and recreation areas ---------- 275.00
SEWER -- 4" service, 6" mains, 8" trunk, good code installation, well vented and trapped ---- 230.00
WATER -- 4" - 6" mains, good valve connections and hydrants at sites. Sprinkler systems for common areas ---------- 200.00
ELECTRICAL -- Underground conduit, 40 to 60 amperes per space. Good street lighting, floodlighted recreation areas. Costs include telephone connections at sites (but not TV systems) ------- 400.00
GAS -- Low pressure gas to all sites ---------- 100.00
MISCELLANEOUS -- Outdoor recreational facilities, ornamental landscape, signs, some masonry. Swim pool costs are not included-- 175.00
GOOD PARK -- Cost per space ----- 1910.00

MODIFIERS

Number of Spaces	60	80	100	120	140	160
Multiplier	1.20	1.14	1.09	1.05	1.02	1.00

Recreational Buildings ---$10.50 sq. ft.
Utility Buildings -------- 4.10 sq. ft.

TRAILER PARKS

EXCELLENT

This mobile home park provides the best accomodations available for the large mobile home that is being built today in competition with the average to good conventional sub-division home. Varied and complete recreational facilities are available and will be complete with small utility building and carport. Base area per site varies from 5000 sq. ft. to sites of a much larger area. The base number of spaces is 200 units.

ENGINEERING	Permits, fees, bonds, survey, and detailed plans and specifications.	$190.00
GRADING	Drainage, view, and roads roughed in	125.00
STREET PAVING	Good 3" asphalt roadways on prepared base, 32 to 40 feet wide, curbs, finished parking areas for visitors and extra cars.	320.00
PATIOS AND WALKS	Trailer stands, patios, and car stands. Average 550 square feet of concrete per space, including walks around buildings and the recreation areas.	310.00
SEWER	4" service, 6" mains, 8" trunk, good code installation	255.00
WATER	4" - 6" mains, good valve connections and hydrants at sites.	195.00
GAS	Low pressure gas to all home sites and buildings.	115.00
ELECTRICAL	Underground conduit, 80 to 100 amperes per space. Good street lighting, floodlighted recreational areas. Costs include telephone boxes at sites.	480.00
MISCELLANEOUS	Outdoor recreational facilities, landscaping and sprinklers, large signs, some ornamentations. Swimming pools are an option.	210.00
EXCELLENT PARK	Cost per space	$2200.00

MODIFIERS

Number of spaces	50	100	150	175	200	225	250	300	350
Multiplier	1.18	1.10	1.04	1.02	1.00	.99	.98	.97	.97

SERVICE STATIONS

SPECIFICATIONS OF TYPE 1 - MINIMUM GRADE

FOUNDATION: Minimum concrete footing and wall.

EXTERIOR WALL: A - wood frame, wood, stucco, or equal siding.
D - concrete block, 8", stuccoed.
E - block, 8", painted.

DOORS: 8' x 10' overhead wood doors, pine entrance doors with glass.

WINDOWS: Double-hung wood sash or minimum metal sash, glass display area.

ROOF: Flat, built-up tar and gravel, plywood decking, wood joists.

FLOORS: Concrete on grade, no cover in base coat.

INTERIOR: Ceiling, drywall, painted in sales area and toilet rooms, storage and bays, paint only.

HEATING: None in base cost. (See schedule on page 73)

PLUMBING: None in base cost. (See schedule on page 73)

LIGHTING: Minimum grade fixtures, minimum outlets, add for all exterior lights.

BASE COST SCHEDULE

(Per sq. ft. of ground floor area, excluding canopies)

		BAYS		
WALL TYPE	SALES AREA	FIRST	SECOND	ADDITIONAL
A - Frame	$10.00	6.35	4.60	4.60
D - Block - stucco	11.10	7.15	5.75	5.75
E - Block, 8", painted	10.20	6.75	5.55	5.55

ADJUSTMENTS

HOISTS

Single Post:
Free Wheel, 8000 lbs. capacity - $ 850
Dual Post:
Heavy duty truck, frame lift - $1650

CONCRETE PAVING

Light Weight	.50
Over 1000 sq. ft.	.45

PUMP ISLANDS

Pumps	Each
2	$ 135
3	200
4	270

ASPHALT PAVING

Up to 1000 sq. ft.	.30
Over 1000 sq. ft.	.25

SERVICE STATIONS

SPECIFICATIONS OF TYPE II - FAIR GRADE

FOUNDATION: Concrete walls and footings.

EXTERIOR WALL: D - Block, 8", stuccoed.
E - Block, 8", painted.
H - Face brick, 4" backing.

DOORS: 10' x 10' sectional overhead, each bay, metal rest room doors. Metal frame glass door to sales area.

WINDOWS: Steel sash, metal frame, plate glass sales area.

ROOF: Flat, wood frame, built-up tar and gravel, insulated.

FLOORS: Concrete slab on gravel base, resilient tile sales area and rest rooms.

INTERIOR: Paint on all exposed walls, sales and rest rooms sheet rock. Frame and sheet rock partitions in base cost.

HEATING: None in base cost. (See schedule on page 73)

PLUMBING: None in base cost. (See schedule on page 73)

LIGHTING: Fair interior lighting and wiring, add for all exterior lighting. (See page 73)

BASE COST SCHEDULE

(Per sq. ft. of ground floor area excluding canopies)

		BAYS		
WALL TYPE	SALES AREA	FIRST	SECOND	ADDITIONAL
D - Block, 8", stucco	14.30	7.55	5.85	5.85
E - Block, 8", painted	13.90	7.20	5.65	5.65
H - Face brick, 4" backing	14.70	7.75	6.50	6.50

ADJUSTMENTS

HOISTS	
Single Post	$ 850
Heavy duty trucks	1400
Dual Post	1100
Heavy truck	1800
Saddle and rails	1900

PUMP ISLANDS	
2 Pumps	$ 200
3 "	245
4 "	300

PAVING	
4" concrete to 1000 sq. ft.	.50
5" concrete to 1000 sq. ft.	.55
6" concrete, reinforced, to 1000 sq. ft.	.75
4" concrete, over 1000 sq. ft.	.40
5" concrete, over 1000 sq. ft.	.50
6" conc., reinforced, over 1000 sq. ft.	.60
Asphalt, to 1000 sq. ft.	.30
Asphalt, over 1000 sq. ft.	.25

SERVICE STATIONS

SPECIFICATIONS OF TYPE 111 - GOOD GRADE

FOUNDATION: Concrete walls and continuous footings.

EXTERIOR WALLS: H - Face brick, 4" backing.
Q - Enameled steel panels on masonry, block rear wall, painted.
R - Enameled steel panels on steel frame, enameled both sides.
S - Formed steel panels on steel frames.

DOORS: 10' x 10' metal sectional overhead doors, good entrance doors to rest rooms and sales area.

WINDOWS: Good grade plate glass front, steel sash in bay areas.

INTERIOR: Sales area and rest rooms drywall ceilings and walls except on type R and type S, ceramic wainscoat walls, rest rooms of type H & Q.

ROOF: Flat, structural steel beam joists, slabform decking, 1" rigid insulation, 4-ply built-up cover.

FLOORS: Concrete on gravel base, ceramic tile in rest rooms and sales area.

HEATING: None in base cost. (See schedule on page 73)

PLUMBING: None in base coat. (See schedule on page 73)

LIGHTING: Good interior lighting in base. Add for all exterior lighting. (See page 73)

BASE COST SCHEDULE

(Per sq. ft. of ground floor area excluding canopies)

		BAYS		
WALL TYPE	SALES AREA	FIRST	SECOND	ADDITIONAL
H - Face brick, 4" backing	$18.50	10.10	7.60	7.60
Q - Porcelain panel on 8" back	20.30	10.95	8.05	8.05
R - Porcelain panel on steel frame	19.70	11.10	8.30	8.30
S - Formed steel panels on steel frame, one side	16.20	10.00	7.40	7.40

ADJUSTMENTS

HOISTS	
Single post	$ 850
Heavy duty	1400
Dual post	1100
Heavy duty	1800
Saddle 1 post, raila on other	1900

PAVING	
4" concrete to 1000 sq. ft.	.50
5" concrete to 1000 sq. ft.	.55
6" concrete,reinfor.,to 1000 sq. ft.	.75
10% less over 1000 sq. ft.	
Asphalt paving, to 1000 sq. ft.	.30
Asphalt paving,over 1000 sq. ft.	.25

PUMP ISLANDS

Each $200 to $300

SERVICE STATIONS

ADDITIVES FOR MAIN BUILDING AND YARD

ROOF

Canopies: attached or free standing including supports, foundations and lights, but exclusive of concrete slab.

Boxed overhang - metal			$5.50 sq. ft.
Driveway canopy - prefabricated metal	$3.00	to	4.85 sq. ft.
Driveway canopy, frame,built-up roof	2.55	to	3.50 sq. ft.

HEATING & COOLING

(Per sq. ft. of area heated or cooled)

	Minimum	Fair	Good
Hot air forced	.68	.80	1.00
Gas fired unit heater	.30	.35	.45
Comb. forced air & air cond.	1.35	1.75	2.25
Evaporative coolers	.50	.75	.90

PLUMBING

(Including rough-in, installation and fittings)

	Minimum	Fair	Good
Sewer & water service	$ 350	375	400
Water closets, each	175	200	225
Lavatory, each	150	175	200
Urinal, wall hung	195	250	300
Floor drain, no trap	25	35	35
Gravel catch basin or sump	325	400	475
Drinking fountain (attached)	150	200	235
Water taps	20	25	30

Hot Water Heaters	30 Gallon	40 Gallon	50 Gallon
Gas	125	150	175
Electric	140	165	200

Gas - heavy duty - quick recovery, 75 gal. $325; 85 gal. $500
Electric Line Heater, $100

EXTERIOR LIGHTING

"T" type island fixture - with pole

Unit	Lamps	Cost
4'	4	$175
4'	6	190
6'	4	235
6'	6	250
8'	6	310

Cantilever flood lights - less pole

Unit	Lamps	Cost
4'	4	$215
4'	6	255
8'	4	285
8'	6	350

Island area light 20" porcelain -	$ 55
Cluster lights, 3 fixtures -	200
Round flood light -Mercury vapor	190
Benjamin yard floodlight	75

Pole	
Tapered, 9'	$ 95
Tapered, 16'	120
Heavy duty, 24'	215

SERVICE STATION DEPRECIATION SCHEDULE

The proper depreciation to be given a service station should reflect the total accrued depreciation applicable to the subject property. There may be functional depreciation as well as physical that will affect the market value of many stations.

The following depreciation schedule is suggested and reflects a small degree of obsolescence in the older type station. The table has been correlated with the findings developed by market analysis.

The correct depreciation to use will depend on the actual expected life of the subject service station. For example, if the appraiser estimates a service station will have a remaining useful life of 10 years, the market value of the building will be 50% of the reproduction cost.

AGE	DEPRECIATION
New	3%
2	4%
5	10%
8	15%
10	20%
12	25%
15	35%
17	40%
20	50%
22	55%
25	60%
27	65%
30	70%

Older - Stations with an effective age of more than thirty years should be studied very carefully and depreciated according to the observed conditions.

SERVICE STATIONS

SERVICE STATION EXAMPLE

The following demonstrates a build-up computation of a metal station with good grade materials and workmanship. The building contains 300 sq. ft. of sales area, 350 sq. ft. in the first bay and 350 sq. ft. in the second bay.

BASE COSTS

Sales area - 300 sq. ft. @ $16.20	$ 4,860	
1st bay - 350 sq. ft. @ $10.00	3,500	
2nd bay - 350 sq. ft. @ $7.40	2,540	
Total Base Cost		$ 10,900

ADDITIVES FOR MAIN BUILDING

Canopy - 600 sq. ft. @ $5.50		$ 3,300	
Heating, forced - 1000 sq. ft. @ $1.00		1,000	
Plumbing - sewer & water service		400	
2 toilets	@ 225	450	
2 lavatories	@ 200	400	
1 urinal	@ 300	300	
2 floor drains	@ 35	70	
1 drinking fountain	@ 235	235	
4 water taps	@ 30	120	
1 30-gal. hot water heater		140	
Total Additive Costs			$ 6,415

OTHER IMPROVEMENTS

Yard paving - 500 sq. ft. 4" concrete @ $ .50	$ 250
1400 sq. ft. asphalt @ $ .25	350
Pump Island - 2 islands $ $250	500
Hoist - 1 single post, 8000 lb. capacity @ $850	850
LIGHTING - Exterior	
Two 4' Units, 4 Lamps @ $ 175	350
Four 8' Units, 4 Lamps @ $ 285	1,140
PETROLEUM TANKS	
2 Underground - 10,000 Gallon Capacity @ $1800	3,600
TOTAL REPRODUCTION COST	$ 24,355

SERVICE STATIONS - PETROLEUM TANKS

VERTICAL STORAGE TANKS
Above Ground

REMARKS: Costs include fittings, piping, gravel base, painting, overhead and profit.

Add for steel ladder mounted on side of tank $ 4.00 L.F.
Add for concrete base .55 S.F.

Gallons Capacity	Feet Dia.		Feet Height	Cost
2,015	7'	x	7'	$ 475
3,000	8'	x	8'	630
4,136	8'	x	11'	1,025
5,260	8'	x	14'	1,150
5,880	10'	x	10'	1,215
7,050	10'	x	12'	1,380
8,820	10'	x	15'	1,600
10,000	10'	x	17'	1,850
12,000	11'	x	17'	1,910
15,000	11'	x	21'	2,225
19,194	11'	x	24'	2,850
21,330	11'	x	27'	3,000

HORIZONTAL TANKS
Above Ground

REMARKS: Costs include fittings, piping, painting, overhead and profit.
Add for steel saddle and concrete tank supports.

Gallons Capacity	Feet Dia.		Feet Height	Cost
2,500	64"	x	15'	$ 650
3,000	72"	x	14'	785
4,000	72"	x	19'	1,020
5,570	84"	x	18'	1,350
6,000	96"	x	16'	1,435
7,500	96"	x	20'	1,620
8,500	108"	x	18'	1,950
10,000	120"	x	17'	2,145
12,000	132"	x	17'	2,350
15,000	132"	x	21'	2,700
20,000	132"	x	28'	3,250

If angle iron tank supports, add:

Gallons Capacity	Item Cost
5,000	$ 195
6,000	220
7,500	235
8,500	265
10,000	330
12,000	400
15,000	425
20,000	510
30,000	620

Add for concrete saddles or foundations, $1.75 per cubic foot.

SERVICE STATIONS - PETROLEUM TANKS

UNDERGROUND STORAGE TANKS

Gallons Capacity	Cost *
285	$ 185
560	235
1,000	300
1,500	410
2,000	525
2,500	590
3,000	660
4,000	810
5,000	1,000
6,000	1,360
7,500	1,440
8,000	1,540
10,000	1,815
12,000	2,165
15,000	2,600
20,000	3,095

* Costs based on two or more tanks in one excavation. Includes excavation, backfill, fittings, boxes and vents.

LIQUID PETROLEUM GAS STORAGE TANKS

Domestic

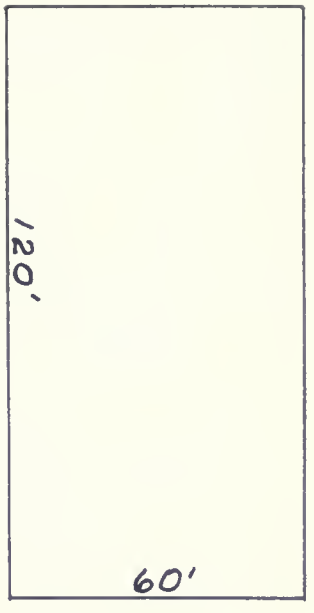
Gallons Capacity	Dimensions	Cost
120	24" x 5' 9"	$ 175
300	37" x 6' 6"	280
500	37" x 10'	440
1,000	41" x 16' 2-5/8"	785

Bulk Storage

3,000	46" x 35' 7"	$ 2,240
8,000	72" x 39' 3"	4,165
12,000	90" x 40'	6,000
18,000	90" x 58' 10"	8,750
20,000	108" x 45' 1-1/2"	11,730
30,000	108" x 66' 3"	12,500

LOT VALUE COMPUTATIONS

RULE 1
RECTANGULAR LOTS



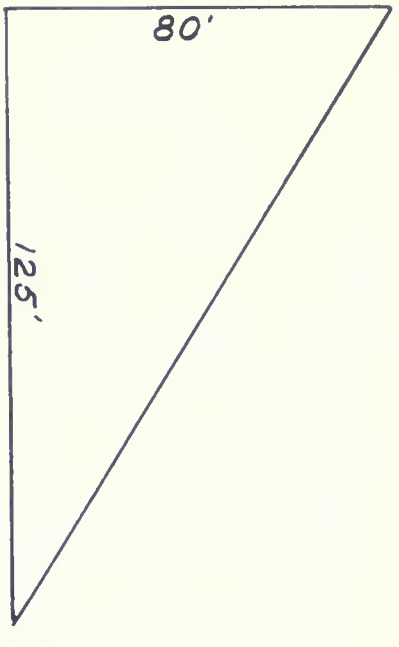
This is the most common shaped lot. The only variation being in the depth.
EXAMPLE: A lot 60' wide and 120' deep in a sub-division where the standard lot depth is 140'. The front foot val for a 140' deep lot has been established by comparison to be $50 per front foot.

The unit % is determined by using the 140' standard depth table. Read across from the 120 foot "depth in feet" column, the percentage is 93%. This lot is computed and listed as follows:

$50 x 93% = $46.50 per F.F. x 60' = $2,790

Frontage Figured	Average Depth	Unit Price	Unit %	Front Ft. Price	Total Value
60'	120'	$50	93%	$46.50	$2,790

RULE 2
TRIANGULAR LOT - BASE ON STREET



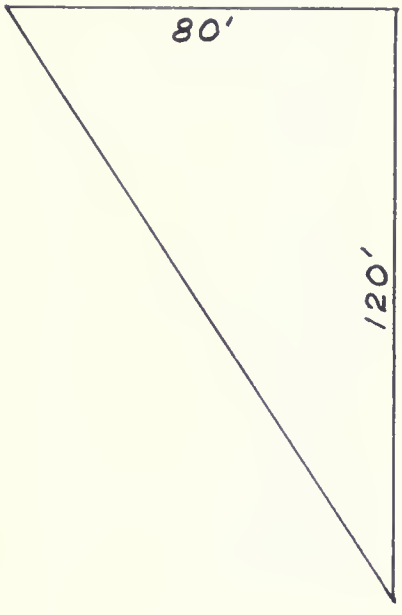
Triangle lots that base on the street are computed at 66% of the street frontage for the lot width. The depth is measured perpendicular from the base to the apex.
EXAMPLE: A triangle lot having a frontage of 80' and depth of 125' in an area where the standard depth is 150' and the front foot value is $60.

The unit % is determined by using the 150' standard depth table. Read across from the 124 foot "depth in feet" column, the percentage is 91%. This is computed and listed as follows:

80' x 66% = 52.8'
$60 x 91% = $54.60 x 52.8' = $2,882.88 - rounded to nearest $5 is $2,885.

Frontage Figured	Average Depth	Unit Price	Unit %	Front Ft. Price	Total Value
52.8'	125'	$60	91%	$54.60	$2,885

RULE 3
TRIANGULAR LOT - APEX ON THE STREET



STREET

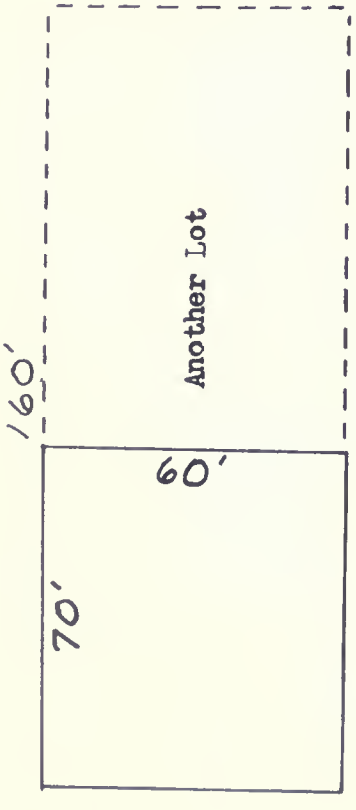
Triangle lots having the apex on the street are computed at 34% of the base or rear width.
EXAMPLE: A triangle lot with the apex on the street having a base of 80' and 120' depth, on a street where the standard depth is 150' and the front foot value has been established by comparison at $60 per front foot.

The unit % is determined by using the 150' standard depth table. Read across from the 120 foot "depth in feet" column, the percentage is 89%. The lot is computed and listed as follows:

80' x 34% = 27.2'
$60 x 89% = $53.40 x 27.2' = $1452 - rounded to nearest $5 is $1450.

Frontage Figured	Average Depth	Unit Price	Unit %	Front Ft. Price	Total Value
27.2'	120'	$60	89%	$53.40	$1450

RULE 4
BACK LOT



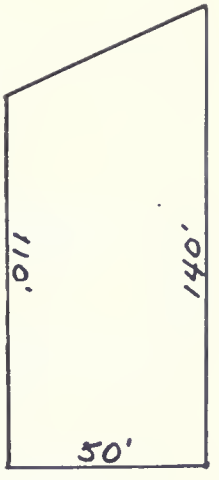
Lots that do not have a street frontage are termed back lots.
EXAMPLE: A lot 60' wide and 160' deep in a standard depth area of 140'. The rear 70' depth has been deeded in separate ownership. The front foot value has been established by comparison to be $45 per foot.

Using the 140' standard depth table determine the percentage for the total 160' depth. This percentage is 107%. Subtract the depth percentage for the 70' depth, which is 71%. The remainder is the percentage to be applied to the front foot value. Compute and list this lot as follows:

107% - 71% = 36%
$45 x 36% = $16.20 x 60' = $972 - rounded to the nearest $5 is $970. "R" denotes rear lot.

Frontage Figured	Average Depth	Unit Price	Unit %	Front Ft. Price	Total Value
60' R	70'	$45	36%	$16.20	$970

LOTS WITH PARALLEL SIDES OF UNEQUAL LENGTH



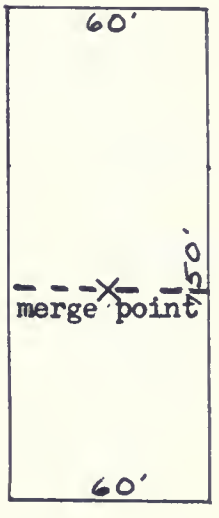
This lot has side lines at right angles to the street but with unequal depth.
EXAMPLE: A lot with a 50' front and unequal sides of 140' and 110', in an area where the standard depth is 140' and the front foot price is $60 per foot.

This lot is computed and listed as follows:

110' + 140' = 250' ÷ 2 = 125' average depth - apply RULE 1.

Frontage Figured	Average Depth	Unit Price	Unit %	Front Ft. Price	Total Value
50'	125'	$60	94%	$56.40	$2,820

MERGED LOTS

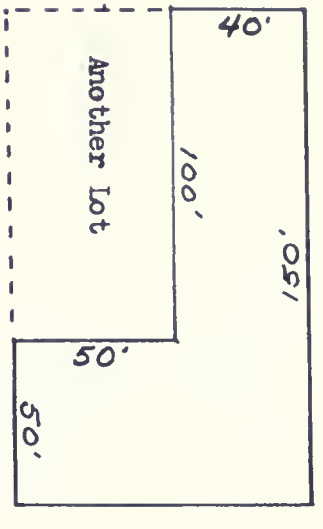


Lots that extend from one street to another and have a higher value on one street than the other must be merged in a ratio influence to value. To find the merge point add the two values together and divide into the total depth.
EXAMPLE: A lot 150' deep, 60' wide, fronting on two street of different values. By comparison one street is valued at $40 per front foot and the other is $30 per front foot. Standard lot depth in this area is 140'.

$40 + $30 = $70
150' ÷ $70 = 2.14
$40 x 2.14 = 86' - apply RULE 1.
$30 x 2.14 = 64' - apply RULE 1.

Frontage Figured	Average Depth	Unit Price	Unit %	Front Ft. Price	Total Value
60'	86'	$40	78%	$31.20	$1870
60'	64'	30	68%	20.40	1225

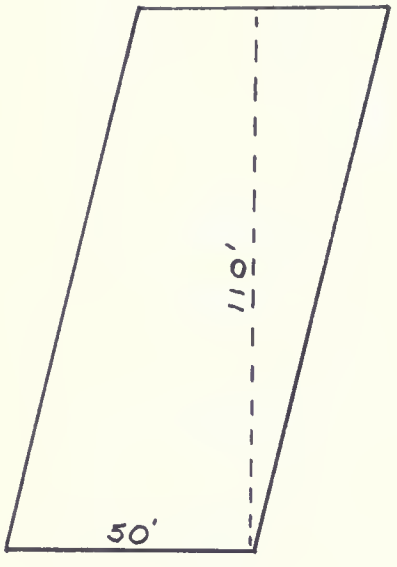
L SHAPED AND BACK LOT



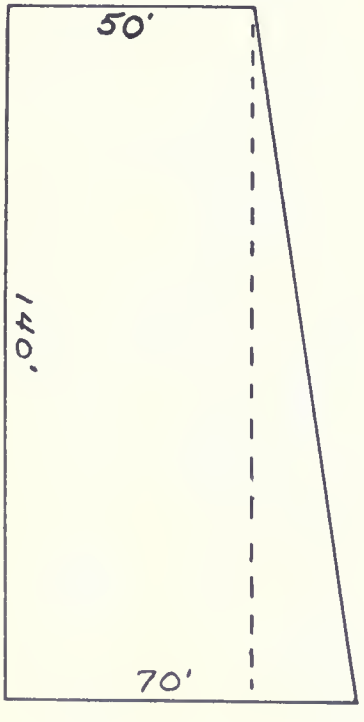
An "L" shaped lot having a portion as a back lot is computed and listed as follows:
EXAMPLE: A lot having a depth of 150' with a 40' street frontage with a 50' "L" protruding behind another lot in an area 140' standard depth and a $60 front foot value.

Use two lines - apply RULES 1 and 4.

Frontage Figured	Average Depth	Unit Price	Unit %	Front Ft. Price	Total Value
40'	150'	$60	104%	$62.40	$2495
50' R	50'	60	19%	11.40	570



STREET



PARALLELOGRAM LOTS

Measure this type lot at a right angle to the street rather than following the lot line. Use this depth measurement for the corrective factor from the depth table.
EXAMPLE: A lot with 50' front and 110' depth in an area where the standard depth lot is 140' and the front foot value has been established by comparison at $40 per front foot. This lot is computed and listed as follows:

Apply RULE 1.

Frontage Figured	Average Depth	Unit Price	Unit %	Front Ft. Price	Total Value
50'	110'	$40	89%	$35.60	$1,780

TRAPEZOIDAL LOT

A lot with parallel front and rear lines of unequal length is computed and listed as follows:
EXAMPLE: A lot 140' deep, 50' front and 70' rear in an area where the front foot value is $40 and the standard depth is 140'.

Use two lines - apply RULES 1 and 3.

Frontage Figured	Average Depth	Unit Price	Unit %	Front Ft. Price	Total Value
50'	140'	$40	100%	$40	$2000
7'	140'	40	100%	40	280

Same lot but with longest parallel line on the street apply RULES 1 and 2.

LOT DEPTH VALUATION CALCULATIONS

The tables on pages 83 to 86 are to be used as guides for calculating values for lots that are either shorter or longer than the standard lot depth in the area.

Standard lot depths are shown across the top of the tables above the solid line. The left hand column shows various actual depths that may exist.

Select the actual depth and follow across to the proper standard lot depth for the area being appraised. The figure encountered is the percentage factor to be applied to the front foot value of the lot. The modified front foot value is then multiplied by the width of the lot.

LOT DEPTH VALUATION FACTORS

Depth in Feet	100'	110'	115'	120'	125'	130'
10	32	30	29	29	28	28
12	35	33	32	32	31	30
14	37	36	35	34	34	33
16	40	38	37	37	36	35
18	42	40	40	39	38	37
20	45	43	42	41	40	39
22	47	45	44	43	42	41
24	49	47	46	45	44	43
26	51	49	48	47	46	45
28	53	50	49	48	47	46
30	55	52	51	50	49	48
32	57	54	53	52	51	50
34	58	56	54	53	52	51
36	60	57	56	55	54	53
38	62	59	58	56	55	54
40	63	60	59	58	57	55
42	65	62	60	59	58	57
44	66	63	62	61	59	58
46	68	65	63	62	61	59
48	69	66	65	63	62	61
50	71	67	66	65	63	62
52	72	69	67	66	65	63
54	73	70	69	67	66	64
56	75	71	70	68	67	66
58	76	73	71	70	68	67
60	77	74	72	71	69	68
62	79	75	73	72	70	69
64	80	76	75	73	72	70
66	81	77	76	74	73	71
68	82	79	77	75	74	72
70	84	80	78	76	75	73
72	85	81	79	77	76	74
74	86	82	80	79	77	75
76	87	83	81	80	78	76
78	88	84	82	81	79	77
80	89	85	83	82	80	78
82	91	86	84	83	81	79
84	92	87	85	84	82	80
86	93	88	87	85	83	81
88	94	89	88	86	84	82
90	95	90	88	87	85	83
92	96	91	89	88	86	84
94	97	92	90	89	87	85
96	98	93	91	89	88	86
98	99	94	92	90	89	87
100	100	95	93	91	89	88
102	101	96	94	92	90	89
104	102	97	95	93	91	89
106	103	98	96	94	92	90
108	104	99	97	95	93	91

LOT DEPTH VALUATION FACTORS (Cont.)

Depth in Feet	100'	110'	115'	120'	125'	130'
110	105	100	98	96	94	92
112	106	101	99	97	95	93
114	107	102	100	98	96	94
116	108	103	100	98	96	94
118	109	104	101	99	97	95
120	110	104	102	100	98	96
122	111	105	103	101	99	97
124	111	106	104	102	100	98
126	112	107	105	102	100	98
128	113	108	106	103	101	99
130	114	109	106	104	102	100
132	115	110	107	105	103	101
134	116	110	108	106	104	102
136	117	111	109	107	104	102
138	118	112	110	107	105	103
140	118	113	110	108	106	104
142	119	114	111	109	107	105
144	120	114	112	110	107	105
146	121	115	113	110	108	106
148	122	116	114	111	109	107
150	123	117	114	112	110	107
152	123	118	115	113	110	108
154	124	118	116	113	111	109
156	125	119	117	114	112	110
158	126	120	117	115	112	110
160	127	121	118	116	113	111
162	127	121	119	116	114	112
164	128	122	119	117	115	112
166	129	123	120	118	115	113
168	130	124	121	118	116	114
170	130	124	122	119	117	114
172	131	125	122	120	117	115
174	132	126	123	120	118	116
176	133	127	124	121	119	116
178	133	127	124	122	119	117
180	134	128	125	123	120	118
182	135	129	126	123	121	118
184	136	129	126	124	121	119
186	136	130	127	125	122	120
188	137	131	128	125	123	120
190	138	131	129	126	123	121
192	139	132	129	127	124	122
194	139	133	130	127	125	122
196	140	133	131	128	125	123
198	141	134	131	128	126	123
200	141	135	132	129	126	124

LOT DEPTH VALUATION FACTORS

Depth in Feet	135'	140'	145'	150'	155'	160'
10	27	27	26	26	25	25
12	30	29	29	28	28	27
14	32	32	31	31	30	30
16	34	34	33	33	32	32
18	37	36	35	35	34	34
20	39	38	37	37	36	35
22	40	40	39	38	38	37
24	42	41	41	40	39	39
26	44	43	42	42	41	40
28	46	45	44	43	43	42
30	47	46	45	45	44	43
32	49	48	47	46	45	45
34	50	49	48	48	47	46
36	52	51	50	49	48	47
38	53	52	51	50	50	49
40	54	53	53	52	51	50
42	56	55	54	53	52	51
44	57	56	55	54	53	52
46	58	57	56	55	54	54
48	60	59	58	57	56	55
50	61	60	59	58	56	56
52	62	61	60	59	58	57
54	63	62	61	60	59	58
56	64	63	62	61	60	59
58	66	64	63	62	61	60
60	67	65	64	63	62	61
62	68	67	65	64	63	62
64	69	68	66	65	64	63
66	70	69	67	66	65	64
68	71	70	68	67	66	65
70	72	71	69	68	67	66
72	73	72	70	69	68	67
74	74	73	71	70	69	68
76	75	74	72	71	70	69
78	76	75	73	72	71	70
80	77	76	74	73	72	71
82	78	77	75	74	73	72
84	79	77	76	75	74	72
86	80	78	77	76	74	73
88	81	79	78	77	75	74
90	82	80	79	77	76	75
92	83	81	80	78	77	76
94	83	82	81	79	78	77
96	84	83	81	80	79	77
98	85	84	82	81	80	78
100	86	85	83	82	80	79
102	87	85	84	82	81	80
104	88	86	85	83	82	81
106	89	87	86	84	83	81
108	89	88	86	85	83	82

LOT DEPTH VALUATION FACTORS (Cont.)

Depth in Feet	135'	140'	145'	150'	155'	160'
110	90	89	87	86	84	83
112	91	89	88	86	85	84
114	92	90	89	87	86	84
116	93	91	89	88	87	85
118	93	92	90	89	87	86
120	94	93	91	89	88	87
122	95	93	92	90	89	87
124	96	94	93	91	89	88
126	97	95	93	92	90	89
128	97	96	94	92	91	89
130	98	96	95	93	92	90
132	99	97	95	94	92	91
134	100	98	96	95	93	92
136	100	99	97	95	94	92
138	101	99	98	96	94	93
140	102	100	98	97	95	94
142	103	101	99	97	96	94
144	103	101	100	98	96	95
146	104	102	100	99	97	95
148	105	103	101	99	98	96
150	105	104	102	100	98	97
152	106	104	102	101	99	97
154	107	105	103	101	100	98
156	107	106	104	102	100	99
158	108	106	104	103	101	99
160	109	107	105	103	102	100
162	110	108	106	104	102	101
164	110	108	106	105	103	101
166	111	109	107	105	103	102
168	112	110	108	106	104	102
170	112	110	108	106	105	103
172	113	111	109	107	105	104
174	114	111	110	108	106	104
176	114	112	110	108	107	105
178	115	113	111	109	107	105
180	115	113	111	110	108	106
182	116	114	112	110	108	107
184	117	115	113	111	109	107
186	117	115	113	111	110	108
188	118	116	114	112	110	108
190	119	116	114	112	111	109
192	119	117	115	113	111	110
194	120	118	116	114	112	110
196	120	118	116	114	112	111
198	121	119	117	115	113	111
200	122	120	117	115	114	112

THE APPRAISAL OF FARM BUILDINGS

In appraising farm buildings, the appraiser should attempt to arrive at the value their presence adds to the value of the farm. The degree of usefulness of the buildings should help to establish their value.

Farm out buildings are priced on a square foot basis predicated on the theory that the larger the area the less per square foot the building will cost. Condition should not be confused with quality. Estimates of replacement costs should be made as though the buildings were reproduced with new materials and good workmanship.

Specifications and cost data for several types of farm buildings are presented in the following pages. Barns, various types of sheds, feeding facilities, hog houses, and silos are found on many ranches in Montana and it is hoped that the appraised value will be more equitable among the several counties and between the various types of buildings through the use of this manual. Selection of the grade is accomplished through inspection of the subject building and comparing its structural features with those found in the manual. Adjustments can be made to compensate for variations from standard basic costs.

Inferior material and labor, used material, and buildings of poor quality can be brought into the right cost bracket through the use of the lower grade price in each type of building.

The following points should be kept in mind as a guide to the proper grade or quality key:

Low-Cost - recognized by poor design, unplanned, low grade materials and labor.

Average - moderate cost structure, minimum of planning, average or less quality of material. This type of farm building is found throughout the

state.

Good - good structural design, usually contractor built with good materials.

The quality key should be used when the subject is either greater or less than the standard for the grade chosen. The percentage of quality can vary from 5% to 25%, greater or less, than standard.

Buildings depreciate because they wear out physically. They also depreciate by going out of style or they lose their utility and therefore become less valuable.

In arriving at an estimated sound value for farm buildings the appraiser is required to determine a basic depreciation factor representing the combined effect of both physical and functional depreciation. Obviously, consideration must be given to whether or not the specific building is ideally suited to or is even essential to the operation of the farm on which it is located. In some instances buildings are super-adequate. They reflect a cost far exceeding the actual need of the farm operation. This is very true of some barns which were built to care for draft animals of a bygone era. The use of good judgement will result in realistic appraisals.

BARN
LOW COST CONSTRUCTION

FOUNDATION: Mud sills.
WALLS: Board and batten siding on wood studs; pine doors and windows.
FLOORS: None
ROOF: Gambrel or gable type, asphalt shingles, wood decking, wood rafters and framing.
OTHER FEATURES: Stalls and bins. Minimum electric lighting.

AREA	PRICE PER S.F.	AREA	PRICE PER S.F.
600	$2.50	4500	$1.55
800	2.30	5000	1.55
1000	2.15	5500	1.50
1500	2.00	6000	1.50
2000	1.90	7000	1.45
2500	1.80	8000	1.40
3000	1.75	9000	1.40
3500	1.70	10000	1.35
4000	1.65		

ADJUSTMENTS

LOFT: Add $1.15 for area of loft.

FLOORS: Add $0.50 per sq. ft. of floor area for concrete.

Further refinement to this grade of construction can be accomplished by using a quality factor of plus or minus 5% to 25%.

BARN
AVERAGE CONSTRUCTION COST

FOUNDATION: Concrete or stone walls.
WALLS: Wood frame, single siding, paint.
FLOORS: None.
ROOF: Gambrel or gable. Wood frame, shingles, aluminum, or steel.
OTHER FEATURES: Electric lighting. Stalls and drives.

AREA	PRICE PER S. F.	AREA	PRICE PER S. F.
600	$4.20	4500	$2.90
800	4.00	5000	2.80
1000	3.90	5500	2.75
1500	3.75	6000	2.75
2000	3.55	7000	2.70
2500	3.45	8000	2.70
3000	3.25	9000	2.65
3500	3.05	10000	2.65
4000	2.95		

ADJUSTMENTS

LOFT: Add $1.25 per square foot of loft area.
FLOOR: Add $0.50 per square foot for concrete; add $0.65 per sq. ft. for plank.

Further refinement to this grade of construction can be accomplished by using a quality factor of plus or minus 5% to 25%.

BARN
GOOD CONSTRUCTION

FOUNDATION:	Concrete walls and footings.
WALLS:	Concrete block or wood frame, sheathing, siding, paint.
FLOORS:	Wood plank or concrete.
ROOF:	Gambrel type, wood or steel frame, clear span, asphalt shingles, aluminum, or steel cover.
MECHANICAL FEATURES:	Electric lighting. Water piping and hose bibs.
OTHER FEATURES:	Grain bin, good partitions.

AREA	PRICE PER S. F.	AREA	PRICE PER S. F.
600	$7.40	4500	$4.70
800	6.65	5000	4.55
1000	6.25	5500	4.50
1500	5.95	6000	4.45
2000	5.70	7000	4.40
2500	5.50	8000	4.30
3000	5.30	9000	4.25
3500	5.05	10000	4.20
4000	4.90		

ADJUSTMENTS

LOFT: Add $1.35 per square foot of loft area.

Further refinement to this grade of construction can be accomplished by using a quality factor of plus or minus 5% to 25%.

OPEN FRONT SHED

Livestock & Implement

FOUNDATION: Post in ground.
WALLS: Board and batten or equivalent - three sides.
FLOOR: None.
ROOF: Shed type, add 5% for gable.
OTHER FEATURES: Add $0.05 per square foot for minimum 110 volt electrical service.

AREA	LOW	AVERAGE	GOOD
500	$1.75	$2.00	$2.30
1000	1.60	1.85	2.10
2000	1.50	1.70	1.95
3000	1.40	1.60	1.85
4000	1.35	1.55	1.80

Further refinement to this grade of construction can be accomplished by using a quality factor of plus or minus 5% to 10%.

LOW COST
IMPLEMENT SHED
POLE CONSTRUCTION

FOUNDATION:	Piers.
WALLS:	Corrugated metal on wood girts and timber poles.
FLOOR:	None. (Add $0.45 per sq. ft. for concrete slab.)
ROOF:	Double pitch, corrugated metal on wood slats and wood rafters.
OTHER FEATURES:	None. (Add $0.10 to $0.15 per sq. ft. for electric lighting.)

AREA	PRICE PER S. F.	AREA	PRICE PER S. F.
1000	$2.50	3000	$2.15
1500	2.40	3500	2.05
2000	2.25	4000	2.00
2500	2.20	5000	1.95

Further refinement to this grade of construction can be accomplished by using a quality factor of plus or minus 5% to 10%.

AVERAGE
IMPLEMENT SHED

FOUNDATION:	Concrete or stone piers.
WALLS:	Good wood frame, metal or wood siding, painted.
FLOORS:	Concrete. (Deduct $0.50 per sq. ft. for no floor.)
ROOF:	Average shed or gable, metal covering.
MECHANICAL FEATURES:	Electric lighting. (Deduct $0.15 to $0.30 per sq. ft. for no electricity.)

AREA	PRICE PER S. F.	AREA	PRICE PER S. F.
1000	$3.15	3000	$2.65
1500	2.90	3500	2.55
2000	2.75	4000	2.50
2500	2.70	5000	2.45

Further refinement to this grade of construction can be accomplished by using a quality factor of plus or minus 5% to 10%.

GOOD
IMPLEMENT SHED

FOUNDATION:	Concrete walls and footings.
WALLS:	Steel or wood frame, metal siding, concrete block, or good wood sheathing and siding painted.
FLOORS:	First, concrete; loft, pine on wood joists. (Deduct $0.60 for no concrete floor.)
ROOF:	Steel or wood frame, metal cover.
OTHER FEATURES:	Electric lighting, 220 volt service.

AREA	PRICE PER S. F.	AREA	PRICE PER S. F.
1000	$3.75	3000	$3.15
1500	3.45	3500	3.05
2000	3.30	4000	3.00
2500	3.25	4500	2.95

ADJUSTMENTS

HEATING:	Add $0.25 per square foot of heated area.
INTERIOR PARTITIONS:	Add $0.75 per square foot of partition.

Further refinement to this grade of construction can be accomplished by using a quality factor of plus or minus 5% to 10%.

SWINE FARROWING BARN

FOUNDATION: Concrete wall and footers.
WALLS: Concrete block.
FLOORS: Concrete, slatted floors are additional.
ROOF: Double pitch, asphalt shingles.
CEILING: Insulated and plywood finish.
OTHER FEATURES: Electric lighting.

BASE BUILDING COST Cost per square foot of ground area.

ground floor area	750	1000	1500	2000	3000	4000	5000
	$4.65	4.30	4.00	3.85	3.70	3.55	3.50

TYPICAL FARROWING EQUIPMENT

	Cost per sq. ft. floor area
Wood farrowing pens and ventilation	$2.00
Steel farrowing pens and ventilation	3.75

MODIFICATIONS Cost per sq. ft. ground floor area

Metal roof	+ $0.15
Roll roof	- 0.06
Wood shingle roof	+ 0.18
Supplemental heat	+ 0.25
Full slatted floor and pit	+ 1.25
25% slatted floor and pit	+ 0.60
Frame insulated wall	- 0.20
Frame wall, no insulation	- 0.75

LIQUID MANURE TANKS Rectangular - 10' deep and 20' wide.

Length	Gal. Cap.	Cost
40'	60,000	$4500
80'	120,000	8500

FARROWING EQUIPMENT

	each
Steel farrowing stalls	$185
Steel farrowing pens	175
Wood farrowing pens	50
Ventilation fan	175
Concrete block pens	75
Automatic waterer & pipe	25

OUTSIDE IMPROVEMENTS

Concrete exercise apron $0.50 S. F.
Wood fencing per lin. ft. $1.25
Steel panel fence per lin. ft. $6.00

SWINE FINISHING BARN OR SHELTER

FOUNDATION: Concrete perimeter.
WALLS: Metal or wood, pole framing.
FLOOR: Concrete, slatting is an additional cost.
ROOF: Metal.
MISC.: Electricity.

BASE BUILDING: Cost per square foot of ground floor area

BLDG. A

Ground floor area	1000	2000	3000	4000	5000	6000	7000	10000
	$3.15	2.55	2.35	2.25	2.20	2.15	2.15	2.10

ADJUSTMENTS

	Cost per sq. ft.
Asphalt shingle roof	-$0.08
Roll roofing	- .15
Full slatted floor	+ 1.25
25% slatted floor & pit	+ .60
Masonry fd. with frame wall	+ .25

TYPICAL FEEDING EQUIPMENT

	Cost as shown
Wood pens, per lin. ft.	$3.00
Steel pens, per lin. ft.	10.00
Masonry pens, per lin. ft.	3.45
Automatic heated waterer	85.00
Automatic unheated waterer	55.00
Automatic overhead feeder/ft.	35.00

METAL FEED STORAGE TANK AND DELIVERY AUGER

Diameter	Height	Ton Capacity	Cost Each
6'	15'	4	$575
6'	20'	6.5	625
6'	25'	10	700
8'	23'	14	1300
8'	29'	21	1380
8'	34'	28	1550

CIRCULAR LIQUID MANURE TANKS

Diameter	Gal. Cap.	Cost
32'	60,000	$4000
48'	135,000	8500

GOOD GRADE

POLE BARNS AND ARENAS

	LOW	AVERAGE	GOOD
FOUNDATION:	None	None	None
FLOORS:	None	None	None
ROOF:	2"x6" rafters, 1"x4" purlins & gal. iron cover.	2"x6" rafters, 2"x4" purlins & metal cover.	2"x8" rafters, 6" purlins, braces, metal cover.
WALLS:	Untreated poles 6" to 8" dia. with 4"x6" beams. Metal clad 3 sides.	Treated poles 6" to 8" dia., 6"x6" beams. Metal clad 3 sides.	Treated poles 6" to 10" dia., 6"x8" beams. Metal clad.

AREA	LOW	AVERAGE	GOOD
600	$1.30	$1.55	$1.75
1000	1.25	1.50	1.65
1500	1.20	1.40	1.55
2000	1.15	1.30	1.45
3000	1.10	1.20	1.35
5000	1.05	1.15	1.25
7500	1.00	1.05	1.20
10000	.95	1.00	1.10
15000	.90	.95	1.05
25000	.80	.85	1.00

ADJUSTMENTS

FLOORS: Concrete - add $0.30 to $0.50 per square foot.
VENTS: Stationary $35 to $75 each. Rotary, $100 to $140 each.

Further refinement to these grades of construction can be accomplished by using a quality factor of plus or minus 5% to 10%.

(LOW GRADE HAY SHED)

FEEDING AND HAY SHED

	LOW	AVERAGE	GOOD
FOUNDATION:	Mud sills.	Piers.	Concrete.
FLOORS:	None.	Concrete aprons.	Concrete aprons.
ROOF:	Wood frame, low pitch with metal cover.	Wood frame, light trusses & metal cover.	Wood frame, good trusses & purlins, metal cover.
WALL:	Minimum, light frame, no siding.	Average frame, no siding.	Wood frame, partially sided.
ELECTRICAL:	None.	None.	None.

PRICE PER SQUARE FOOT

AREA	LOW	AVERAGE	GOOD
1000	$0.80	$0.95	$1.25
2000	0.75	0.85	1.15
3000	0.65	0.75	1.05
5000	0.60	0.70	.95
7000	0.55	0.65	.90
9000	0.50	0.60	.80
11000	0.50	0.60	.75

Further refinements to these grades of construction can be accomplished by using a quality factor of plus or minus 5% to 10%.

PORCELAIN SILO

TYPE - Harvestore silo, porcelain steel.

DIAMETER	HEIGHT	COST
14'	40'	$10100
14'	50'	12600
17'	40'	12240
17'	50'	15300
20'	27'	9720
20'	30'	10800
20'	40'	14400
20'	50'	18000
20'	60'	21600
25'	65'	29250
25'	80'	36000

The above prices include foundation, erection, and automatic unloader.

Deduct for no unloader:

14'	$2500
17'	3100
20'	3700
24'	4600

CONCRETE STAVE SILO

Price includes chute, foundation, and erection.

DIAMETER	HEIGHT	COST
10'	30'	$ 1645
10'	40'	2300
10'	50'	3100
12'	30'	1780
12'	40'	2360
12'	50'	3100
14'	40'	2760
14'	50'	3450
16'	30'	2415
16'	40'	2760
16'	50'	3800
16'	60'	4600
18'	50'	4485
18'	60'	5300
20'	40'	4140
20'	50'	5060
20'	60'	6095
20'	70'	7245
24'	40'	6095
24'	50'	7245
24'	60'	8510
24'	70'	10120

"A"

"B"

POTATO STORAGE BUILDINGS

BUILDING A

The typical below ground storage has a dirt floor, post supported A-frame structure covered with baled or loose straw and dirt. Ventilation is supplied by wood air ducts.

BUILDING B

The typical above ground storage building has concrete floor, masonry insulated wall, air ducts in floor and wall, insulated walls and ceiling and asphalt shingle roof.

BASE BUILDINGS

Cost per sq. ft. of ground area

	2000	4000	6000	8000	10000	15000
BUILDING A	$2.10	2.00	1.90	1.90	1.80	1.75
BUILDING B	5.15	4.60	4.10.	3.90	3.85	3.75

ADJUSTMENTS TO BASE BUILDINGS

Building A or B, cost of each ventilating fan:

24"	$100
36"	150

Building A

Per sq. ft. ground area

Concrete floors and ducts ---$1.15

Building B

Per sq. ft. ground area

Insulated frame wall-----	-$0.50
Metal roof ----------	+ .10
Roll roofing ----------	+ .05
Earth floor ----------	- .50

CONCRETE FENCE BUNK

CATTLE FEEDING BUNKS AND FENCING COSTS

Used in feed lots where feeding from either side is desirable. Typical bunks are constructed of concrete, some have plank sides and post construction.

BASE COSTS	Per lineal foot
Concrete bunk	$10.00
Plank bunk	5.50

ADJUSTMENTS	Costs per square foot
Roof	$1.00
Concrete apron	.55

STOCK WATERERS	
Cattle	$125.00
Hog and sheep	75.00

Typical farmer-built feed bunks are constructed of rough lumber and posts, some are made of finished planking. Feeding from one side only.

BASE COSTS	Per lineal foot
Rough lumber fence bunk	$5.00
Concrete fence bunk	7.00

MECHANICAL FEEDERS	Cost per lineal foot
Automatic control	$25.00
Manual control	15.00

FARM BUILDING UNIT COST SCHEDULE
COST IN PLACE

FOUNDATION - FOOTINGS & WALLS

Per lineal foot

	Light	Average	Heavy
Mud sills	$0.30		
Poured concrete footing and foundation wall	1.35	$2.05	$4.25
Wood on concrete piers	.41	.66	1.55

FLOORS

	Per sq. ft.
Asphaltic concrete	$0.25
Concrete slab	0.50
Flooring, 1"	0.45
Flooring, 2"	0.65
Subfloor - shiplap	0.33

Joists

	Per sq. ft.
2" X 6", 24" O.C.	$0.24
2" X 8", 24" O.C.	0.31
2" X 10", 24" O.C.	0.31
2" X 12", 24" O.C.	0.38
2" X 12", 16" O.C.	0.56

CEILING

	Per sq. ft.
Composition	$0.13
Metal	0.34
Plaster cement	0.28
Plywood	$0.30
Sheetrock	0.25
Shiplap	0.25

ROOF FRAMING - SHEATHING AND COVER

	Per sq. ft.
Fiberglass	$0.50 to $0.85
Metal	0.38
Roll composition, 3 ply	0.20
Sheathing, 1" solid	0.30
Sheathing, 1" spaced	0.18

Rafters

	Per sq. ft.
2" X 4", 24" O.C.	$0.25
2" X 6", 24" O.C.	0.26
2" X 8", 24" O.C.	0.28
Shingles	0.35

EXTERIOR WALL

Per Sq. Ft. of Wall Area

2" X 4", 24" O.C.	$0.20
2" X 6", 24" O.C.	0.28
Board and batts	0.55
Cedar shingles	0.34
Concrete block	1.31
Aluminum	0.39
Galvanized iron	0.31
Laminated 2" X 4"	0.88
Paint	0.10
Bevel siding	0.61
Novelty siding	0.56
Posts and girts	$0.15
Shakes	0.61
Sheathing, 1"	0.34
Stucco on masonry	0.33
Doors, wood, hinged Per sq. ft.	$2.20 to 2.80
Doors, wood, sliding, Per sq. ft.	1.25 to 2.20
Windows, wood each	7.50 to 18.75

FARM BUILDING UNIT COST SCHEDULE
COST IN PLACE
-Continued-

INTERIOR

Per lineal foot - 8' high

Concrete block wall, 8"	$12.50
Wood frame various wood finishes,	
One side	6.00
two sides	9.00

PLUMBING

Drinking cups	$18.75 to $37.50
Floor drain	25.00
Hose bibs	18.75
Lavatory	145.00
Metal sink	87.00
Pipe line washer (dairy)	375.00
Water heater	145.00

ELECTRICAL WIRING

Cost per outlet

Conduit	$ 12.50
Romex or knob & tube	6.25
Service,	
Light	50.00
Medium	150.00
Heavy	250.00

Cost per fixture

Reflector type	$5.00
Vapor & dust proof	10.00

DEPRECIATION OF FARM OUTBUILDINGS

BASIC DEPRECIATION TABLE (GUIDE ONLY)

Actual Age	Excellent 1	Good 2	Average 3	Poor 4
0 - 3 Yrs.	3%	5%	7%	10%
4 - 8	3 - 8	5 - 10	10 - 15	15 - 25
9 -12	9	10 - 15	15 - 20	25 - 30
14 - 18	10	15 - 20	20 - 25	30 - 35
19 - 23	15	20 - 25	30 - 35	40 - 50
24 - 38	20	25 - 30	35 - 40	50 - 55
39 - 42	25	35	40 - 50	55 - 60
43 - 50	30 - 35	40 - 50	55 - 60	65 - 70
50 - 60 & over	40	50	65	70 - 75

EXCELLENT - Building is in perfect condition.

GOOD - Minor physical depreciation is evident.

AVERAGE - Average deterioration.

POOR - Pronounced physical deterioration.

EXAMPLE

Subject: Average quality barn; 4000 sq. ft.; full loft; 28 yrs. old. Depreciation 35%.

Base cost	$2.95 sq. ft.
Add for loft	1.25
Total cost per sq. ft.	$4.20
Replacement cost - 4000 sq. ft. x $4.20	= $16,800
Less 35% estimated physical depreciation	5,880
	$10,920
Less 25% functional depreciation	2,730*
Estimated present value	$ 8,190

*The functional depreciation was allowed because there was limited use for the loft.

(Sample Farm)

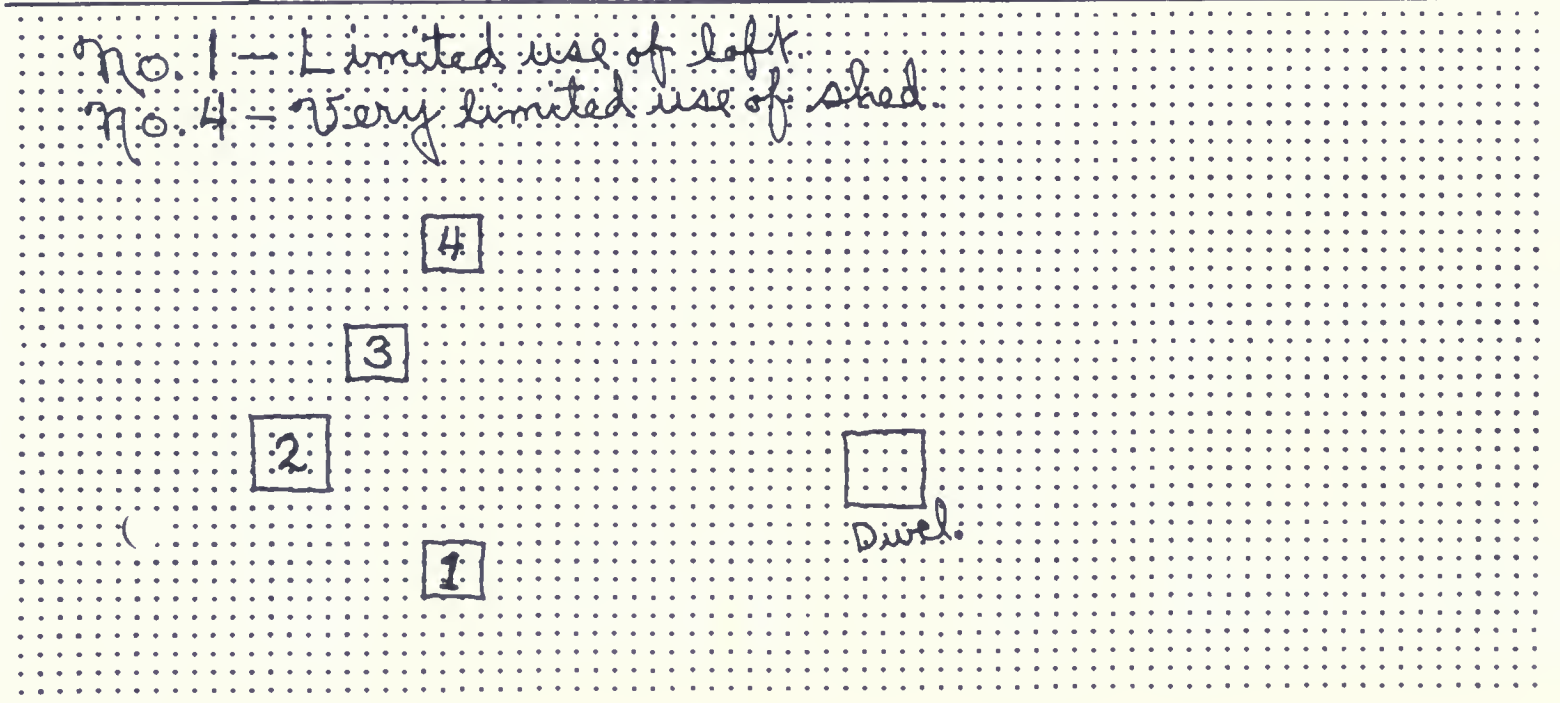
OUTBUILDINGS

	1	2	3	4	5	6	7	8	9	10	11	12
EARTH FLOOR	✓	✓		✓								
CEMENT FLOOR			✓									
SIDING	W	M	B	B								
WALL FOUND.												
~~STONE~~ FOUND.	C	C	C	C								
Roofing	W	M	M	W								
Loft	W											
ELECTRIC LIGHTS	✓	✓	✓	O								
O.H. DOORS												
GRADE	A	G	G	L								

	OCCUPANCY	AGE	CONDITION	SIZE	SQ. FT. AREA	BASE RATE	REPL. VALUE	PHYSICAL DEPR.	PHYSICAL VALUE	FUNC. DEPR.	NORNAL VALUE	LOCAL INDEX	SOUND VALUE
1	Barn	1947	A	40x100	4,000	4.20	16,800	35	10,920	25	8,190		8,190
2	Quon.(Behlen)	1970	G	52x190	9,880	1.60	15,810	5	15,020	0	15,020		15,020
3	Imp. Shed	1965	G	30x40	1,200	3.75	4,500	8	4,140	0	4,140		4,140
4	Shed	1945	P	23x30	690	2.55	1,760	53	827	55	370		370
5													
6													
7													
8													
9													
10													
11													
12													
											TOTAL		27,720

APPRAISED BY JBL DATE 6-20-72 PRICED BY JBL DATE 6-20-72 POSTED BY DATE

No. 1 – Limited use of loft.
No. 4 – Very limited use of shed.



ABBREVIATIONS

P - Poor
A - Average
G - Good
E - Excellent

B - Block
BB - Board & Batten
BR - Brick
C - Concrete
CS - Comp. Shingles
F - Frame
L - Log
M - Metal
MS - Mud Sill
N - None
P - Pole
RR - Rolled Roof
S - Stone
T - Tile
W - Wood

ROUND CORRUGATED STEEL BINS

FULL VALUES

BU. CAP.	BIN	FOUNDATION	ERECTED ON FOUNDATION
1000 Bu.	$ 475	$ 50	$ 525
1330 Bu.	575	55	630
1650 Bu.	745	80	825
2200 Bu.	820	95	915
2700 Bu.	1040	110	1150
3300 Bu.	1210	135	1345
4400 Bu.	1425	155	1580
5200 Bu.	1540	175	1715
5900 Bu.	1685	225	1910
6600 Bu.	1800	250	2050
7200 Bu.	1925	300	2225
8200 Bu.	2125	340	2465
9500 Bu.	2750	400	3150
12000 Bu.	3625	435	4060
18000 Bu.	4185	475	4660
22000 Bu.	4685	525	5210

The above schedule is based on the average cost of steel grain bins in Montana. Bins of poor quality can be price from 5% to 15% less. Bins of good quality can be priced from 5% to 15% more than schedule.

BOILER PLATE BINS

CAPACITY	PER BU.	TOTAL IN PLACE
10,000 Bu.	$ .65 Bu.	$ 6,500
15,000 Bu.	.60 Bu.	9,000
20,000 Bu.	.55 Bu.	11,000
25,000 Bu.	.52 Bu.	13,000
30,000 Bu.	.50 Bu.	15,000
40,000 Bu.	.45 Bu.	18,000
50,000 Bu.	.40 Bu.	20,000

CRIBBED BINS AND ANNEXES

Average cost of cribbed type elevators found on farms is approximately 95¢ per bushel if the capacity is under 10,000 bu. Annexed storage in addition, constructed of 2" x 6" lumber, averages around 50¢ to 60¢ per bushel.

MEASURES

SQUARE

144 sq. in. = 1 sq. ft.

9 sq. ft. = 1 sq. yard

4840 sq. yds. = 1 acre

43,560 sq. ft. = 1 acre

640 acres = 1 sq. mi. or 1 section

36 sq. mi. = 1 township

CUBIC

1728 cu. in. = 1 cu. ft.

27 cu. ft. = 1 cu. yard

128 cu. ft. = 1 cord

231 cu. in = 1 gallon

1 cu. ft. = .8036 bu.

LINEAR

5 1/2 yds. = 1 rod

16 1/2 ft. = 1 rod

320 rods = 1 mile

5280 ft. = 1 mile

To compute the circumference of a circle - Multiply the diameter by 3.1416.

To compute the area of a circle - Multiply the square of the diameter by 0.7854, or multiply the square of the radius by 3.1416.

To compute the cubical contents of a circular column or cylinder - Multiply the area of the circle by the height.

Alfalfa Seed	1 Bushel	60 Pounds
Barley	1 "	48 "
Beans	1 "	60 "
Flax Seed	1 "	56 "
Oats	1 "	32 "
Potatoes	1 "	60 "
Rye	1 "	56 "
Wheat	1 "	60 "

DATE DUE

MISC MAY 22 '74					
MISC MAY 29 '74					
JUNE 11					
JULY 10					
MISC AUG 30 '78					

S/351.724013/E4m
Montana. Revenue, Department of
Montana appraisal manual, 1972 edition

S/351.724013/E4m
Montana. Revenue, Department of
Montana appraisal manual, 1972 edition

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